FIRE ENGINEERING

The Journal of the Fire Protection Profession Since 1877

NOVEMBER, 1956

Firemen unable to approach blazing Woonsocket mill operate hand line to prevent involvement of exposures—See Page 1106

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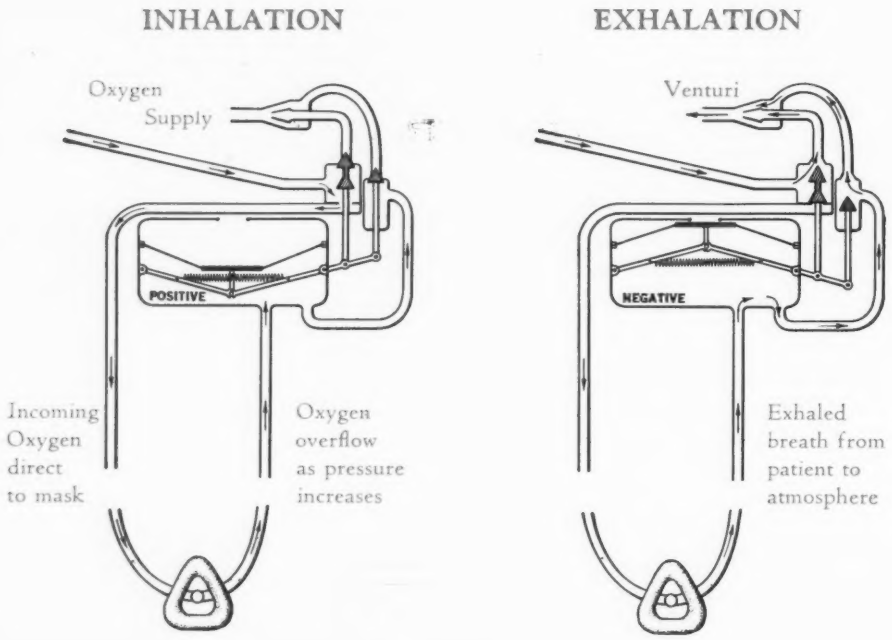
The Million Dollar Fire—Today's Problem
The Invaluable Walkie-Talkie
The Place of Nylon in Fire Hose

EMERSON Resuscitators



The flow of oxygen to the patient (left) in a standard portable model Emerson Resuscitator and the flow of exhaled breath (right) are shown diagrammatically above. Note the pattern of flow as controlled by the 3 valves. Oxygen coming to the patient never passes through any part of the mechanism that has carried exhaled breath. (There is back-and-forth breathing through the mask and mask-head, but these and the hoses are easily washable.)

If you happen to treat a patient who exhales disease germs, you can be sure that they will not be picked up in the mechanism by the in-flowing oxygen and carried to the next patient. Oxygen for the patient does not pass through the mechanism or the venturi.

This unique feature of Emerson Resuscitators is covered by U. S. Patent No. 2268172 and Canadian Patent No. 405705. Perhaps such cleanness is only occasionally of life-saving importance; but it is one reason why Emersons are known far and wide as the

"Simplest and Safest!"

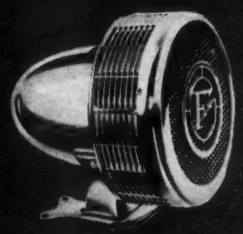
SIMPLE TO OPERATE — ECONOMICAL OF OXYGEN — VEPSATILE — RUGGED

Made by the makers of Emerson Iron Lungs and other medical breathing equipment

J. H. EMERSON COMPANY
22 COTTAGE PARK AVENUE, CAMBRIDGE 40, MASSACHUSETTS, U. S. A.

Model No. 17 Beacon Ray

The famous Beacon Ray 360° revolving light, unsurpassed in clearing apparatus through traffic.



Model Q Siren

Class Q and C coaster sirens surpass all others and lead a complete line of sirens and siren-light combinations.

Don't Miss It!

Fire-Ball light

The new Fire-Ball provides effective low cost Beacon protection for volunteer's cars, for tankers or secondary apparatus.

Model VG Siren

Class V sirens represent low price and high quality in audible warning for use of volunteers, deputies or auxiliaries.

Model 27-S Beacon Ray

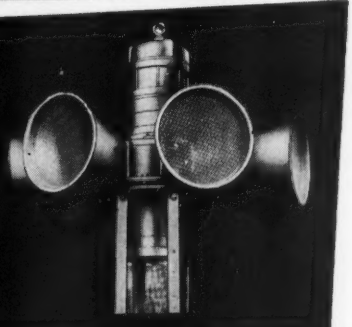
A stationary mounting Beacon Ray for outside the firehouse; protecting dangerous intersections, or signifying other hazards.

Leading warning signals for leading fire companies are on display at Federal's I.A.F.C. Convention booth. It's a noteworthy display of progress, reliability and variety. Now is your opportunity to see and discuss Federal's famous line of warning signals.

Again, we say, **"don't miss it!"**

Model STH-10 Siren

A new improved vertical siren for municipal fire or disaster alarm.



FEDERAL SIGN and SIGNAL Corporation

8702 S. State Street, Chicago 19, Illinois

FIRE ENGINEERING

VOL. 109 NOVEMBER, 1956 NO. 11

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THANKS!

This is the month for giving thanks.

Looking back, it would seem we have much to be thankful for, socially, economically, politically.

Here at FIRE ENGINEERING we have a special reason for giving thanks. The October IAFC Conference and Buyers Guide Issue saw every record of the past 79 years shattered—size, weight, content (both editorial and advertising pages) of the book, as well as the number of subscribers and advertisers.

From what our readers in every root and branch of the municipal, private, institutional and government fire service tell us, the book was outstanding not alone in its sheer physical dimensions, but also in the quality of its editorial and advertising content. As one old-time reader (who incidentally finds FIRE ENGINEERING makes the ideal Christmas gift for his fellow fire fighters) said, "This one issue to me, at least, is worth my entire year's subscription price."

We are grateful to all those who have made these last twelve months the most outstanding in the long, busy life of this Journal of the Fire Service. That includes *you*, and *you*, and *you*—our regular readers, our advertisers and all those others who also look to FIRE ENGINEERING for sound information and guidance in the consecrated task of reducing the loss of lives and property through uncontrolled fire.

The Publishers

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FABRILON

WITH

DOUBLE-SURFACE JACKETS

DOUBLE-SURFACE MEANS DOUBLE-SERVICE

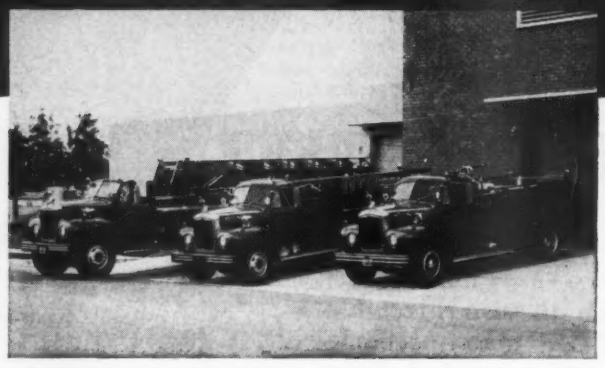
This is a magnified cross-section cut length wise through a FABRILON hose jacket. The cabled warp strands are shown closely interwoven with FABRILON filler cords in FABRIC's exclusive *twill woven* construction.

For every stitch that is inside there are *two* on the outside, which means that *twice* as much material is on the *outside* of the jacket, producing a smooth, *double-wearing* surface attained only in our *twill woven* FABRIC jackets.

FABRIC FIRE HOSE COMPANY

THE ONLY EXCLUSIVE MANUFACTURER OF FIRE HOSE IN AMERICA

SANDY HOOK CONNECTICUT



(*Right*) Three new Macks—1250 and 750 gpm triple combination pumpers and a quintuple combination ladder truck before one of Torrance's four stations. Two more are on order. (*Above*) Pride of the department... a Mack Type B-85 "quint" equipped with an 85-foot aerial ladder, 750 gpm major pump, two hose beds (each for 1000 feet of 2½-inch hose), escape slide, life net, and a complete complement of ground ladders and tools.

Nothing but the best...

. . . for Torrance, California, a city that has grown from 25,000 in 1950 to its present 80,000 —a city that plans today for the needs of an even bigger tomorrow. That's why this fast-growing residential and industrial community (oil fields, tank farms, refineries, manufacturing) relies on Macks—today's finest and most modern fire apparatus.

As Chief J. J. Benner of Torrance says, "I am very pleased with the Mack apparatus in my department." Just how pleased Chief Benner is can be shown by the fact that all but one piece of apparatus in his department are Macks. For good reason, too. Each detail of craftsmanship, every example of design testifies to the quality of Mack construction and to the reasons for Mack leadership in performance, dependability, and durability.

When planning the purchase of new fire apparatus, don't be satisfied with "next best." Only the finest can do the best job for your fire fighters when lives and property are at stake. Let us show you how Macks measure up to your future as well as present needs. Mack Fire Apparatus, Plainfield, New Jersey. In Canada: Mack Trucks of Canada, Ltd.

MACK
first name for
FIRE APPARATUS

4350

COMPLETE LINE OF PUMPERS—500 to 1250 GPM . . . SQUAD AND HOSE WAGONS . . . 65', 75' and 85' AERIALS . . . COMBINATION LADDER TRUCKS

B.F.Goodrich

B. F. Goodrich hose handles easier, gets into action faster

THE amazing light weight and flexibility of B. F. Goodrich Fire King hose makes it a favorite with firemen everywhere. The chief in Natchez, Miss., where this picture was taken, says, "Our men compete with each other to see who is going to work on the truck that has the Fire King hose —they say it handles so much easier than other hose."

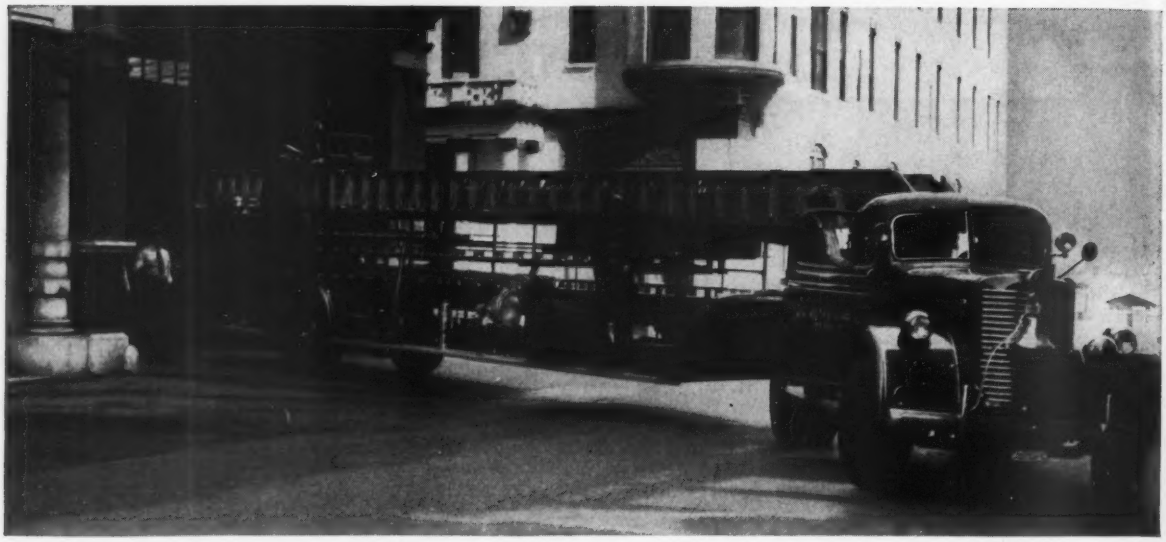
B. F. Goodrich Fire King is 22% lighter than ordinary hose, and 50% stronger. It is tested to 600 pounds pressure to handle increased pumping pressures and to resist sudden pump surges. Fire King is made with Dacron chemically-produced fiber as "filler cords".

And now, for only pennies more per foot, you can add a *new* factor in safety and long life. The new Superseal protection, introduced by B. F. Goodrich in 1955, has virtually eliminated mildew as a hose killer. Exacting tests prove that it makes fire hose 10 times more resistant to mildew and rotting. Unlike ordinary treatments that just coat the surface of hose, the Superseal solution penetrates every cord in both the inner and outer jacket.

When you want hose that will last longer than any fire hose ever sold, get B. F. Goodrich Fire King with Superseal protection. Your B. F. Goodrich fire hose distributor can tell you more about it, or write *B. F. Goodrich Industrial Products Company, Dept. M-805, Akron 18, Ohio.*

B.F.Goodrich

INDUSTRIAL PRODUCTS



Knoxville selects General Electric Progress Line Two-Way Radio System for fire protection

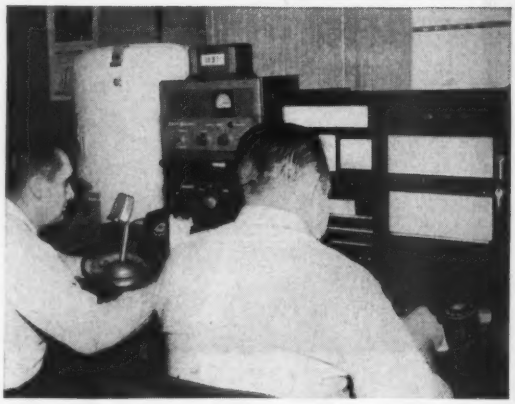
Knoxville, Tennessee, selected General Electric's Progress Line two-way radio for its Fire Department because it offers highest reliability with lowest maintenance cost. High fidelity communication is assured by the controlled reluctance microphones, standard on all Progress Line radios. And only General Electric two-way radios are equipped with 6600 series pre-tested, long-life communication-type tubes.

According to James Swanner, Superintendent of Fire Alarms, solid radio contact can be maintained between his base radio station and that of the Chattanooga Fire Department—114 miles away. He explained that this contact was requested by Civil Defense authorities to tie together fire fighting facilities of the two cities in event of disaster. General Electric Communication Engineers placed the Knoxville base station atop a ridge several hundred feet above surrounding terrain, to assure meeting the CD requirement.

All of Knoxville's fire stations are tied together by the radio system. In addition, 15 engines, a Civil Defense emergency truck, ambulance, and cars of the Chief, Assistant Chief, Superintendent of Fire Alarms, two inspectors, and a mechanic are now smoothly coordinated by two-way radio. This progressive Fire Department has already demonstrated many times how General Electric two-way radio provides improved fire protection for the Knoxville metropolitan area.

* * *

Your use of two-way radio can save money for taxpayers in your city through reduced municipal fire insurance rates for cities with radio-equipped fire departments.



Dispatchers at Knoxville Fire Department Headquarters handle all telephone and two-way radio coordination. All fire station and key vehicles are coordinated via new General Electric two-way radio system.

For Sales and Service...see "Radio Communication Equipment" in your yellow pages. Or, write: General Electric Co., Communication Equipment, Section X59116, Electronics Park, Syracuse, N. Y. *In Canada:* C.G.E. Electronics, 181 Landsdowne Avenue, Toronto.

Progress Is Our Most Important Product

GENERAL ELECTRIC

Meets the 4 most important Fire-Fighting Hat requirements

...THE M·S·A STREAMLINED FIREMAN'S HELMET

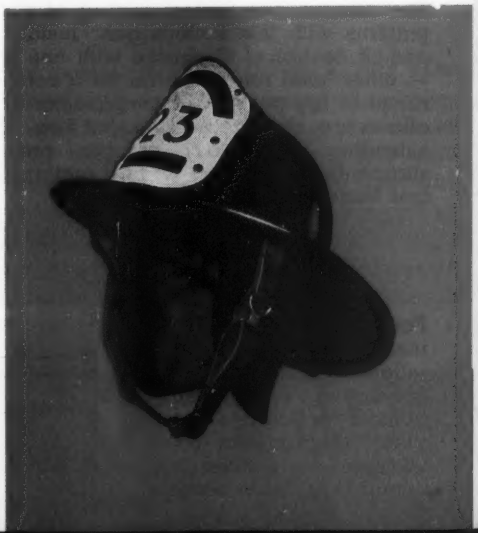
Protection from falling or flying objects, resistance to electric shock, comfort on the job, and durability in service add up to the four-point standard for modern fire-fighting helmets. On each count, the M.S.A. Fireman's helmet has proved its superiority because of these design and material-selection features:

1. IMPACT PROTECTION—The one-piece, laminated construction of the plastic, which is molded under high pressure, takes bumps and blows without passing them on. Reinforced ridge at top aids deflection; sturdy crown hammock cushions blows.

2. DIELECTRIC STRENGTH—A special plastic, selected for its natural resistance to electric shock, is used for the shell construction. Nonabsorbent, this material gives protection that isn't affected by moisture conditions.

3. COMFORT—Very light weight and perfect balance eliminate job fatigue. Soft leather sweatband with sized or adjustable lining permits perfect fit without pressure points. Space between band and hat provide ventilation.

4. DURABILITY—Helmet will not soften or deteriorate when exposed to water or common chemicals. Material and design prevents twisting or warping when exposed to heat.



MSA
SAFETY EQUIPMENT HEADQUARTERS

Streamlined design has plenty of eye appeal. Shields are made of full-grained leather in black, white or red. Color combinations available. Easily zipped-in winter linings assure all-weather comfort. Write for details.

MINE SAFETY APPLIANCES COMPANY
201 North Braddock Avenue, Pittsburgh 8, Pa.
At Your Service: 76 Branch Offices in the United States
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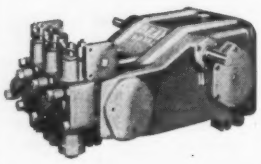
Call the M.S.A. man on your every safety problem . . . his job is to help you

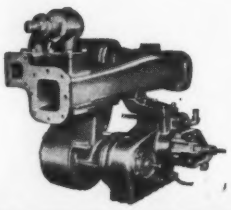
Only the JOHN BEAN HPV* FIRE-FIGHTER has all these features

*HPV — the two-fisted fire-fighter with both High Pressure Fog and Volume pumps (plus John Bean High-Pressure Sno-Foam at low extra cost).

TRUE HIGH-PRESSURE AND MULTI-STAGE PUMPS OPERATE SIMULTANEOUSLY

Operate them together or singly — the John Bean High-Pressure Fog piston pump, delivering 60 GPM at 850 PSI pump pressure — and the John Bean centrifugal volume pump, providing a smooth flow at 500, 600 or 750 GPM.





DUAL BATTERY SYSTEM
Auxilliary battery insures against starting failures.

VACUUM-OPERATED PUMP SHIFT
Quick, positive, trouble-free shifting of volume pump.

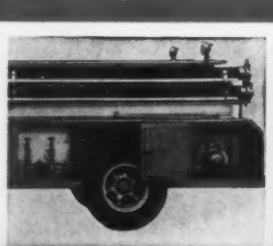
THE PATENTED JOHN BEAN FIRE-FIGHTER GUN

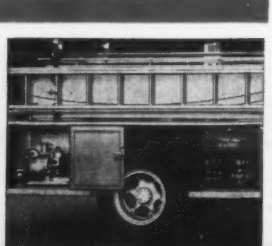
The fireman has perfect control of stream patterns with this famous gun. Instant on-and-off control of discharge with one hand — other hand rotates barrel for a complete range of fog patterns. Face-protector spray allows fast, close approach to hot fires. Hose extending from back of gun provides straight-flow waterway for best performance and easiest handling.

STANDARD TRUCK CHASS

OVER 45 CUBIC FEET OF WEATHERPROOF STORAGE SPACE

Four lighted compartments are built in — one tailored for slide-mounted generating equipment; another for portable water pump. Plus a rear compartment for smaller fire department fire accessory tools.





This two-fisted fire-fighter stops fires faster!

The "HPV" gives you two lines of fast-striking John Bean High-Pressure Fog . . . the *original* high-pressure fog . . . discharged from the guns at 600 to 700 PSI nozzle pressure. Only this true high-pressure fog has such effective triple action — to cool, to smother, to isolate flames in seconds — with 90%

INTERIZED
EL COMPARTMENTS

movable enclosures win-rize the two reel compart-ents. These, as well as mp, valves, gauges and ntrols, are warmed by en-e heat.

POWER
REWIND HOSE REELS

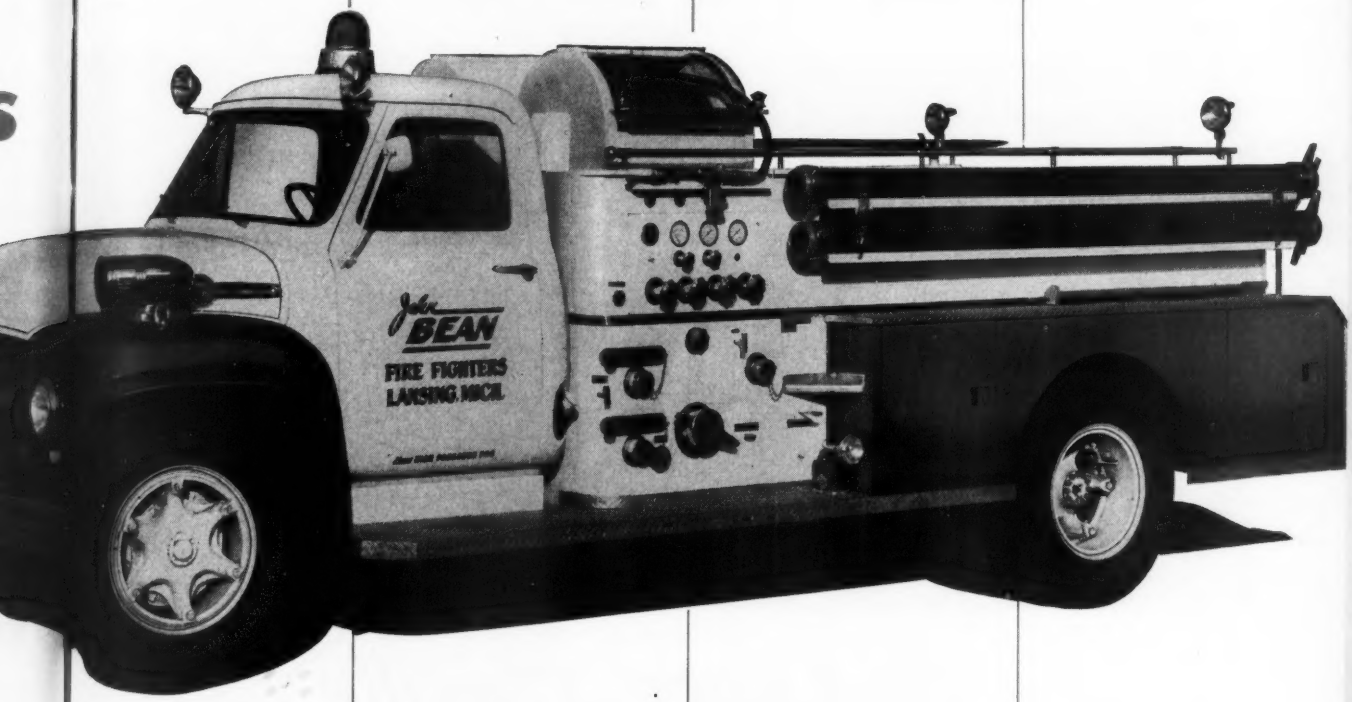
Faster, easier hose pick-up with power operated reels. Hose lays out smoothly and easily over roller guides.

400 FEET OF
HIGH-PRESSURE HOSE

The 200 feet of special, 3500 pounds burst test hose on each reel can be easily handled by one man.

SPACIOUS HOSE BED

Smooth, level hose bed is properly ventilated, carries 1200 feet of 2½-inch and 400 feet of 1½-inch volume hose.



LUMINATED
ONTROL PANEL

ll gauges, valves and con-ols are centralized for in-ant operation — illumin-ted for safety and easy ading at night.

BONDED-TO-METAL FINISH

For longer life and better paint finish, a special corrosion-resistant process is used on all metal surfaces.

40 FEET
OF SUCTION HOSE

Standard equipment includes two 10-foot lengths each of 2½-inch and 4½-inch hard suction hose, complete with hydrant adapters and suction screens.

500-GALLON,
10-GAUGE STEEL TANK

Smooth cornering, starts and stops assured by six-compartment tank with low center of gravity. Prevents undesirable water surge.

HASS John Bean Fire-Fighters can be mounted on most standard truck chassis

less water damage. Fire extinguishing value of water is increased by a ten-to-one ratio — makes the 500 gallons of water on the truck go ten times further.

Add to this, the truck's multiple lines of hard-slugging, Underwriters' approved volume streams and you have an unbeatable combination. Two great John Bean pumps . . . two proven methods of fire-fighting. Use them separately or both at the same time — in any combination. And for fighting grass and brush fires, use high-pressure fog while the truck is in motion.

Because they're designed by firemen . . . men who've fought fire under all kinds of conditions . . . John Bean equipment is designed right for ease of operation. Arriving at a fire, you're in business with four easy steps. Put pump in gear, step out of cab, open valve, adjust throttle for RPM — and presto! your lines are ready for instant action.

The proof is in the doing.

See for yourself what a John Bean HPV Fire-Fighter will do for your community's fire safety. In Lansing, Michigan, you'll get expert instruction and actual practice in volume and high-pressure fog methods at John Bean's Fire-Fighting School. In the meantime, why not contact your local John Bean representative, or write factory direct. In many localities, a demonstration can be arranged for you.

ASK FOR THE JOHN BEAN HPV CATALOG

JOHN fmc® BEAN

Dept. 126
Lansing 4, Michigan

P.O. Box 145
San Jose 3, California

A Division of Food Machinery and Chemical Corporation

for power to spare on the way... at the fire...

Specify Leece-Neville ALTERNATOR SYSTEMS!

Two-way radios, sirens, warning lights, rescue equipment—all combine to place a heavy load on your apparatus batteries. More of a load than the batteries can handle—*unless* you've installed Leece-Neville alternator systems!

Because they produce charging current *as soon as the engine starts*...enough to handle two-way radio transmitting loads...Leece-Neville alternators keep batteries charged . . . ready for fast, sure emergency starts in coldest weather!

And, high speeds can't damage L-N alternators ...they're designed for operation up to 12,000 rpm! What's more, L-N constant voltage level control assures peak radio performance . . . lengthens life of radio components.

Leece-Neville alternators, the original ac-dc generating system, have been used since 1946 as standard generating equipment on hundreds of fire apparatus fleets, both large city and rural volunteer departments. On any type of apparatus, large or small, L-N alternators will set new standards of performance while reducing operating and maintenance expense. For all the facts, see your local L-N distributor or write direct to The Leece-Neville Company, Cleveland 3, Ohio. *Distributors in principal cities . . . service stations everywhere.*

plenty of 110 volt power, too!

For abundant 110 volt power to operate floodlights, power tools, rescue equipment, etc., install a Leece-Neville 110 volt transformer and rectifier in conjunction with the alternator. Ask for special bulletin.

AA-4295

YOU CAN RELY ON Leece-Neville

Automotive Electrical Equipment Since 1909

TRUCK • BUS • DIESEL • INDUSTRIAL • PASSENGER • RAILROAD • MARINE • OFF-HIGHWAY

ALTERNATOR SYSTEMS | D C GENERATORS | REGULATORS | CRANKING MOTORS | SWITCHES | SMALL MOTORS

HOWE

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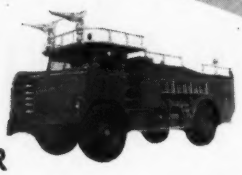

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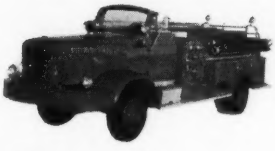

Mack TRUCKS

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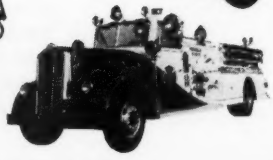
Ahrens-Fox



LEECE-NEVILLE

these leading fire apparatus manufacturers install

Leece-Neville

as original equipment!

LEECE-NEVILLE EQUIPMENT IS USED ON EVERY MAJOR TYPE OF APPARATUS!

PUMPERS • QUADS • AERIAL LADDERS • HOSE WAGONS • SQUAD TRUCKS • RESCUE TRUCKS • AIRPORT CRASH TRUCKS • FOAM TRUCKS EMERGENCY CARS • AND MANY OTHERS

SQUEEZES PAST OBSTRUCTIONS

E & J RESUSCITATOR - INHALATOR - ASPIRATOR

When partial obstructions will not yield to aspiration, or when the air passages are swollen almost shut, the exclusive E & J feature "Precision Flow Control" assumes life-saving importance in emergency rescue treatment.
With it the operator can quickly find just the exact flow of oxygen that will squeeze past obstructions short of complete blockage to provide full inhalation and exhalation at a *slow but life-saving rate!*

FIND OUT MORE ABOUT THIS VITAL E & J FEATURE . . .
Data and demonstration without obligation.
Write to Dept. 544-7 at address below.

E & J RESUSCITATOR • ASPIRATOR • INHALATOR
. . . first name in Resuscitators

E & J MANUFACTURING COMPANY

100 E. Graham Place, Burbank, California

Here's your "Task Force" for any type of fire

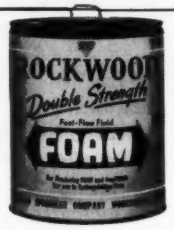
Complete team of Rockwood portable products combines speed, versatility and economy

Separately, each of these Rockwood products has its own particular advantages for fighting various types of fires. Together, they make a mobile, multi-purpose task force that delivers a whale of a lot of protection against *any* type of fire, whether it's Class A (wood, paper, rags, etc.), or Class B (flammable liquids). That includes personnel protection, too, because safety for the men who use them is an essential factor in all Rockwood fire fighting products.

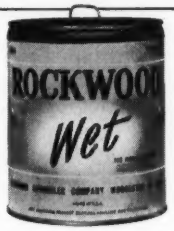
Rockwood's long, practical experience and constant research bring you not only new *efficiency* but new *economy* in fire-fighting methods and equipment. It will pay you to learn more about these and many other Rockwood products. Mail the coupon today for complete information on Rockwood's specialized fire-fighting products.

* **Type SG-60 Nozzle.** A true all-purpose nozzle that fights fire 5 ways. It discharges high velocity WaterFOG, low velocity WaterFOG (with applicator), FogFOAM, solid stream of water or solid stream of FOAM.

FOAM and "Wet" Eductor with the new FW Metering-Check Valve. Introduces Rockwood FOAM or "Wet" into hose lines, automatically proportioning correct amount of FOAM and "Wet" to water. Also usable wherever one liquid is fed into another on a fixed percentage basis.



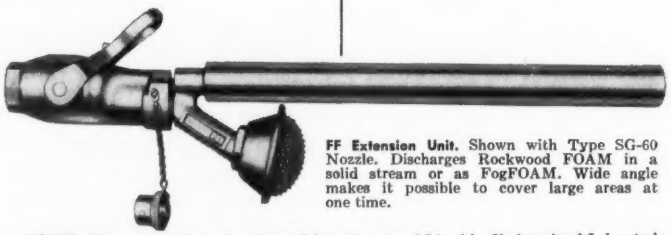
* **Rockwood Double Strength FOAM.** Puts out fires in flammable liquids, and in ordinary combustibles, quicker, at lower cost. Three parts FOAM and 97 parts water create a tremendous heat-resistant blanket. Flows freely at —15°F.



* **Rockwood WET.** One part WET mixed with 99 parts water increases water's penetration and extinguishing action. Gives quickest results against deep seated fires. Saves time, water, manpower.

Bayonet Piercing Applicator. Has a hardened steel cutting tool attached to tip, enabling operator to pierce through partitions, into interiors, etc. Discharges low velocity WaterFOG or FogFOAM.

* **Long Extension Applicator.** Discharges low velocity WaterFOG in an umbrella pattern, smothering fire without causing turbulence to flammables. Excellent personnel protection is another advantage.



FF Extension Unit. Shown with Type SG-60 Nozzle. Discharges Rockwood FOAM in a solid stream or as FogFOAM. Wide angle makes it possible to cover large areas at one time.

**NOTE: The products shown here have all been Tested and Listed by Underwriters' Laboratories, Inc.*

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Engineers Water . . . to Cut Fire Losses

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Please send me your illustrated booklet on Rockwood fire-fighting products.

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should this old hero be retired?

. . . perhaps he should receive a medal, too!

He's served faithfully for years . . . having seen action nine times, extinguishing fires that could have resulted in holocausts!

He carries his scars proudly, but they are evidence of his age . . . the next time he's called on he might fail you! Today's highly volatile materials demand modern, high-quality extinguishers that insure dependable, lightning-fast protection everytime.

Perhaps you have some of these "old heroes" still doing duty for you. If you're wondering about their effectiveness, call your nearest Pyrene-C-O-Two Distributor . . . he can tell you. He has the backing of Pyrene-C-O-Two's expert fire protection engineering, service, with facilities to suggest the right extinguisher for every fire hazard, plus smoke detecting and engineered systems.

Pyrene-C-O-Two sales and service offices are located throughout the United States. Check your classified telephone directory for the name of your nearest Pyrene-C-O-Two Distributor.

TRADE MARK Pyrene REG. U.S. PAT. OFF.

TRADE MARK C-O-TWO REG. U.S. PAT. OFF.

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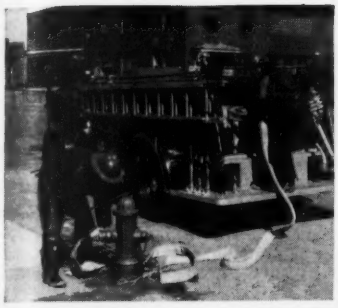
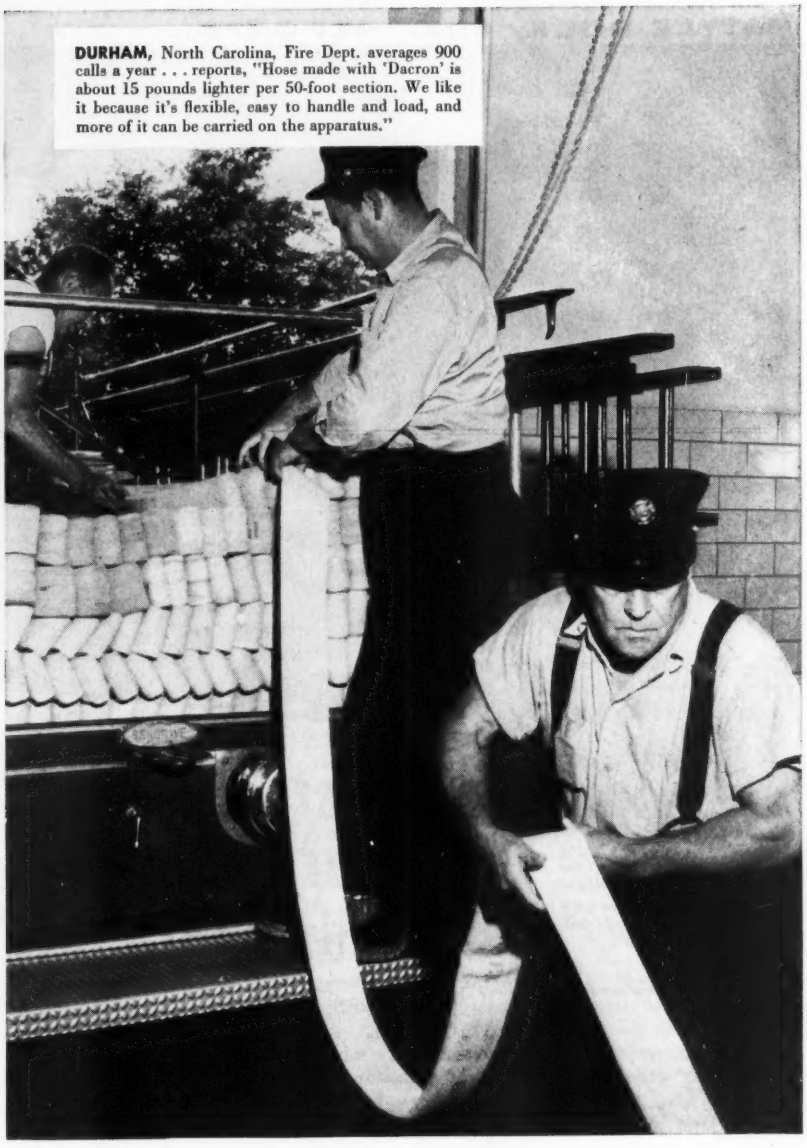
THE FYR-FYTER COMPANY • NEWARK 1, NEW JERSEY
BRANCHES IN ATLANTA, DALLAS, CHICAGO AND SAN FRANCISCO



OMAHA, NEB. "We've found the advantages of hose made with 'Dacron' are many—from quick drying to mildew resistance."

NIAGARA FALLS, N. Y. "Lightweight hose made with 'Dacron' gets into action fast—makes coiling and racking a quicker, easier job."

COLUMBUS, O. "Extra-strong hose made with 'Dacron' is preferred, because it needs less maintenance—cuts repair costs."



DURHAM, North Carolina, Fire Dept. averages 900 calls a year . . . reports, "Hose made with 'Dacron' is about 15 pounds lighter per 50-foot section. We like it because it's flexible, easy to handle and load, and more of it can be carried on the apparatus."

Durham Fire Dept. reports:

"Hose made with DACRON is easy to handle and load"

REG. U.S. PAT. OFF.

Lightweight, flexible and extra-strong, hose made with "Dacron"* polyester fiber helps the Durham Fire Department maintain top efficiency. Chief C. L. Cox reports that 25% more hose made with "Dacron" can be carried on each truck. Like fire chiefs across the country, Chief Cox reports better all-round performance from fire hose made with "Dacron". Used as the load-carrying "filler" cord that reinforces the hose, this Du Pont fiber permits a hose that's light and flexible—yet *stronger* than ordinary hose of the same construction.

Du Pont makes "Dacron" and supplies the yarn to hose manufacturers. The combination of the unusual properties of "Dacron" plus hose manufacturers' skill has resulted in a superior fire hose. Hose made with "Dacron" is made by all leading fire-hose manufacturers. The next time *you* buy hose, be sure it's made with "Dacron". E. I. du Pont de Nemours & Co. (Inc.), Wilmington 98, Delaware.

ADVANTAGES OF FIRE HOSE MADE WITH "DACRON":

- Lighter
- Stronger
- Dries faster
- More flexible
- Cuts loading time
- Saves space

*"Dacron" is Du Pont's registered trademark for its polyester fiber.

For Better All-Around Performance Specify Hose Made with "Dacron"

POLYESTER FIBER

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BETTER THINGS FOR BETTER LIVING
. . . THROUGH CHEMISTRY

LITTLE ROCK, ARK., REPORTS...

Fire Chief Gann Nalley, and Mayor Mann, welcome the modern Gamewell Fire Alarm system installed to protect the lives and property of their fast-growing community.

Lowest Yearly Cost, Reduced Insurance Rates with New GAMEWELL SYSTEM

FIRE FACTS

in Little Rock

Original Gamewell system served efficiently for 42 years. 202 new boxes located in high value districts.

Average of 35 boxes per square mile of built-up area.

Class A Form 4 switchboard, with operator's console, Loud Speaker Inter-communication and paging system serving 11 fire stations, and fire station recording and alarm sounding equipment.

Industrial plants to be safeguarded through Gamewell "Master Box Plan" for extra protection of workmen and industrial plants.

Complete system installed, depreciated and maintained for less than $70.00 per box per year. Additional boxes can be installed and maintained for substantially less than this figure.

Remember-a Gamewell System is FIRST when seconds count!

On April 14, 1956, Little Rock joined the ever-increasing list of communities which have thoroughly investigated all types of fire alarm systems — and selected Gamewell. Here is what they found:

- Average annual cost would be as much as 2½ times cheaper than leased voice type service.
- Gamewell system sets into operation, automatically, the dispatching facilities for the entire fire defenses — including all required central office equipment. The fire alarm system is tailored exactly to the Fire Chief's needs and city's fire defense plan.
- It contributes to improvement of city's fire insurance rating from Class IV to III — a saving to property owners of some $100,000 a *year!*

This new 202-box system was planned for coverage of high value districts and will be expanded to protect the fast-developing outlying areas — additional boxes quickly added at very low cost.

Get ALL The Facts! You can bring these same advantages to *your* community. Just ask for a FREE Gamewell Survey. And, most important, be sure you have *all* the facts on costs and completeness of vital municipal fire alarm protection — send for the Gamewell Booklet, "Conversation or Organization". Write:

THE GAMEWELL COMPANY
Newton Upper Falls 64
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GAMEWELL®

THE BOX IS POSITIVE · REDUCES HUMAN ERROR

FIRE ENGINEERING

VOL. 109, NO. 11 NOVEMBER, 1956

Raw Deal in the Firehouse

"No firemen were just sitting around, wasting time playing cribbage, taking a hand at pinochle or watching television as they do in nearly all of the 2,500 American communities with paid or part-paid fire departments."

That is the way you men of the fire service are catalogued and castigated in the publication said to have the largest distribution of any magazine in the world, the *Reader's Digest*, of October 1956.

That is the word-picture over 32 million people, all of them dependent upon you, their protectors against deadly, destructive fire, will have when they read the article by Karl Detzer, "A *New Deal in the Old Firehouse.*"

The story ardently advocates integration of fire and police forces in American municipalities, particularly those under 50,000 population. It holds up the City of Oak Park, Mich., as a shining example of this "new deal."

To those who look behind author Detzer's statements and consider what he has not said as well as what he has said, a better caption of the tale would be a "*Raw Deal in the Old Firehouse.*" For seldom if ever has the fire service been painted in such distorted, misleading and undeserved light.

In Oak Park, claims Mr. Detzer, citizens *"can't tell the firemen from the policemen these days. But they can tell that their taxes are lower and their protection is greater since they have combined the two forces"* (the emphasis is his).

He says that Oak Park, population 31,000, covering 5½ square miles, "gets along nicely with 53 officers and two girl clerks" in its combined fire and police department, whereas "the average number of policemen and firemen in 81 communities of comparable size is 98." Where they average $14.49 per capita for police and fire, Oak Park spends $10.61, a saving of approximately $102,000.

This Utopia is accomplished by having firemen serve as policemen and vice versa. When the alarm sounds, the on-duty shift (five men including the lieutenant in charge and the drivers of the two pieces of apparatus, that's all), drop their fingerprinting, recording or whatever police or routine work they are doing and "race for the engines." This response crew is reinforced by whatever radio patrolmen-firemen may be on the streets at the time and are fortunate enough to pick up the alarm on their radio. All hands proceed to fight the blaze, police the area, direct traffic and handle the many other details attendant upon the emergency.

The author fails to tell what happens to the fingerprinting, typing of complaints, recording and other detail work which the firemen-turned-policemen were doing when the alarm sounded. Nor does he explain what happens if a robbery or murder, or serious traffic accident or other emergency occurs at the time of the fire. Doubtless this is a detail which malefactors would like to know about (in one city with integrated services, crooks pulled a fire alarm and when the combined force was engaged elsewhere, coolly robbed a local bank).

Continuing his comparison, Mr. Detzer says, "In most cities of Oak Park's size, firemen put in a 72-hour week, which includes the time they sleep. Some city departments average three hours a week at housekeeping duties, two more hours polishing the apparatus and making minor repairs, two hours at drill, perhaps three hours attending to fires." He adds, "That leaves 62 hours a week for which they are paid for idle time."

Mr. Detzer's idea of the "idle time" of today's professional fire fighter is about as far off from fact as his conception of the cribbage-playing crews in our firehouses. He ignores radio field inspections and other fire prevention work now standard practice in most progressive departments. Likewise, he dodges the question of what happens when his combined force faces a fire that gets out of control. Doubtless it relies upon its neighboring fire forces at such a time.

The cardinal oversight, whether by design or accident it seems to us, is this: To make his point, Mr. Detzer considers only the full-paid or part-paid fire and police departments. He completely ignores the hundreds of American communities in the population group wherein he recommends merging forces, which have perfectly satisfactory voluntary or semi-voluntary fire protection, at costs comparable with those of Oak Park, and for which property owners pay no higher insurance rates than they do in cities with paid fire departments. Mr. Detzer hasn't heard of Hempstead, L. I., with twelve volunteer fire companies, and scores of other municipalities with fire departments better manned and equipped than many good paid departments.

Mr. Detzer cannot plead ignorance of the fire service and fire fighting. He has written about both for over 25 years, which makes his diatribe all the more regrettable. Such ill-conceived articles in a magazine like *Reader's Digest*, can benefit neither the nation's fire forces nor the communities they serve.

FIRE ENGINEERING will have more to say on this subject.

Roi B. Woolley

Editor

Spilled paint ignited by a gas heater in a highly combustible plant of the Durham Furniture Co., Muncie, Ind., on February 3, 1955, spread this fire out of control before plant and municipal fire fighters could cut it off, resulting in loss of over $1 million

Not all large losses were in the industrial category. On Easter Sunday, 1955, the Bowling Green, Va. (population 700) business district was swept by fire with property loss approaching $1 million. Local and area firemen were handicapped by lack of water and equipment

The Million Dollar Fire—Today's Problem

Is the Fire Department Responsible for Most of These Big Ones? To What Extent and Why?

By CARL A. WEERS

*Assistant Chief Engineer, National Board of Fire Underwriters**

ALTHOUGH MY TITLE refers to "Million Dollar Fires," I am also talking about the half-million, the quarter-million and other big fires—those of $100,000 and over—the kind of blaze you don't encounter every day but is always hanging over your head waiting to happen.

If you will use your imagination a moment, put yourself in the city where an alarm came in—a delayed alarm. You leave the station with the engine and swing into the 5 p.m. traffic and find yourself on a one-way street blocked solid with cars behind a red traffic light. As you squirm impatiently you see the smoke and flames in the distance. Arriving at the fire scene, you wonder why the first-in engine isn't yet in operation and then you see the operator, a new recruit, fumbling with the controls. You find the officer has the pumper connected to a hydrant on a 4-inch main instead of the hydrant a little farther away that you know is on a 12-inch. After an hour of pumping, the engine runs out of gasoline. The building by this time has been leveled and you can add your own million dollar contribution to the nation's list of large-loss fires.

Improbable, you say? It couldn't happen? Maybe not. This story is not an actual case, but judging from one or two reports we have of actual fires, where there was an almost impossible chain of events—a real comedy of errors—I have come to believe that truth is almost as strange as fiction.

Why a problem?

The large loss fire is a real problem because:

First, the big fire usually spells disaster for a large number of people—by taking life and limb—by throwing hundreds out of work—by wrecking the economy of an entire town or city.

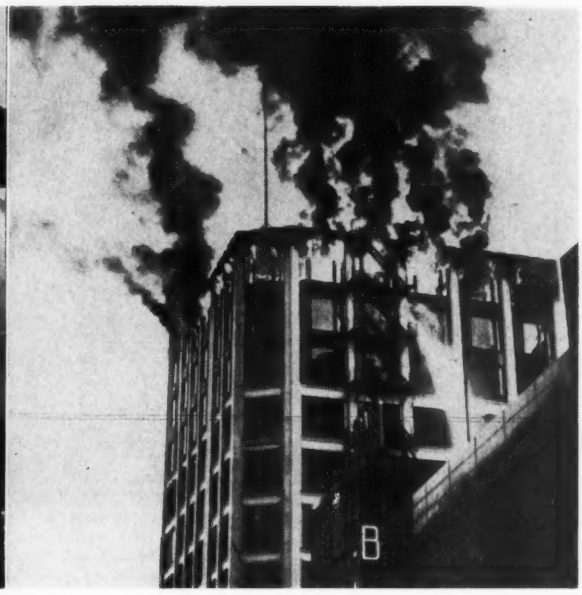
Secondly, a relatively few of the big fires cause a disproportionately large percentage of the national fire loss. Think a moment of the number of building fires that occurred in the United States and Canada last year—about 800,000. Only 316 of these—a mere drop in the "fire" bucket—caused 25 per cent of the total billion-dollar fire loss.

Has this large loss fire problem been getting the attention it needs? Other problems have.

Fire prevention activities have been highly emphasized during the last few decades—and properly so. The home inspection program has been gaining excellent countrywide support. But are we concentrating enough in analyzing the large loss fire? Paul Kearney says in *"Disaster on Your Doorstep,"* "I have long since ceased to be concerned about how fires start; the vital thing is how they

* This text is taken almost in its entirety, with only some slight deletions, from an address made by Mr. Weers before the Pacific Coast, Inter-Mountain Association of Fire Chiefs, at its annual convention in Sacramento, Calif. on August 24, 1956. The editors are indebted to Mr. Weers and to the National Board of Fire Underwriters for permission to publish it.

A closed sprinkler valve gave this Minneapolis fire a start which, before it was controlled by 150 city firemen using 19 pumpers, 7 ladders, a rescue company and 10 other units (with St. Paul covering in) started 70 other fires and caused over $1 million loss



Mercantile losses also ran high in 1955. Approximately $1 million damage was caused by fire, water and smoke to the Maurice L. Rothschild department store, Chicago on July 15. Disaster resulted in law suits of over $1 million

end—and why the small ones are permitted to become big ones."

The problem is attacked

To attack the problem, the first step would seem to be an analysis of the reasons behind the big fires. Two organizations have used this approach:

1. The National Fire Protection Association has been doing its part to stimulate interest and action by collecting and publishing data on such fires, and presenting in a very readable form the reasons why small fires grow large.

2. The National Board of Fire Underwriters has also undertaken a program. For several years we have collected the "What, Where, How and Why" of the big fires. These reports come from the various insurance rating and inspection boards and bureaus from all parts of the country and are written by fire protection engineers and inspectors, who are experienced observers of fire behavior. An estimated 30,000 reports have so far been received and hundreds more come in each year. Causes of these fires are carefully studied and for each significant cause or, as we call it, each "fire factor" a code number is assigned. Each code number has a hole designated for it on an IBM card. (For every fire there is a card with a pattern of holes punched in it.) The use of IBM machines makes it possible to quickly sort, cut and assemble all kinds of useful information.

For example, we were curious to know how many times the breakdown of a pumper, or a flat tire, dead battery, or poor gasoline were factors in the growth of large fires. We set the machine to throw out all cards that had the code number 35-5-10. The machine went to work, ignoring all other code numbers, and finally—out popped *one* card! Only at one fire of the thousands reported on was apparatus failure considered a significant factor. This is a fine commentary on the dependability of modern fire apparatus.

Fire causes listed

Our fire factor classification code is divided into 11 *major* categories, and each of these is broken down further. Every one represents a factor contributing to a big fire. Often there are two, three or more factors that appear, all of which are involved in causing the large loss.

These categories cover the construction and occupancy of the building, of course, which is the way of recognizing the "fast burners." The lack of automatic sprinklers and other private protection are also factors. Poor accessibility is a contribu-

Editor's Foreword: According to the National Fire Protection Association, less than one per cent of all the fires in this country and Canada cause one fourth of these two nations' total billion dollar annual fire losses.

Last year, for example, 316 large-loss fires out of approximately a million others accounted for $267 million in property losses, according to the NFPA. Large-loss fires are described by this authority as those causing damage of $250,000 or more.

Because of the disproportionate losses between these few big fires, and their effect on the nation's economy, the question is often raised, is this problem receiving all the attention it should?

Within the family of students of fire waste and fire protection, we believe the problem is getting attention —although not necessarily to the degree that it should.

Certainly the nation's top fire fighters are conscious of the problem—at least those whose fire loss records have directly suffered inflation from the conflagrations.

Not all of these 316 disastrous fires occurred in large cities where a single costly blaze may not cause as much havoc with the fire department annual loss statements as would be the case in smaller municipalities. Nor were these fires partial to any particular geographical area, or to full-paid, part-paid or volunteer fire services. They followed no pattern—with possibly this one exception: Every single fire, however costly to life or property, involved men consecrated to the business of fire suppression—whether as a vocation or avocation.

Every such fire leaves its impact upon not merely the owners and occupants of the property involved—but upon the fire fighters who were engaged in the action.

The author of the following article, Mr. Carl A. Weers, attempts to define something of that impact. He does not temporize; he pulls no punches; if some of his observations appear to reflect adversely upon some phase or factor of the fire service, it is only because he is presenting the evidence as he has found it. In brief, Mr. Weers holds up a mirror to the fire service.

Fire, out of control before the Redwood City, Cal., Fire Department could get into action, on June 23, 1955, destroyed structures of the Kaiser Gypsum Co. over a six-acre waterfront area, with loss of approximately $2 million. Flaming propane gas boosted blaze

ting cause in some big fires. Weather conditions are another. A very vital factor in many large losses is an inadequate or unreliable water supply. The two bugaboos "delayed discovery" and "delayed alarm" are factors that appear frequently. Of the most interest to fire chiefs today, I think, is the category of the fire department and I'd like to talk about that later.

Our system unique?

Our fire factor classification system, I believe, is unique in these respects:

First, The fire factors established to show why small fires get big are more complete and detailed than in any other system I know of; and

Second, The fire factors are received and recorded from straight-from-the-shoulder statements by fire protection specialists. When fire department deficiencies occur, they are stated as frankly and factually as it is possible for the individual to do. If a fire becomes a large loss because only two men responded on the apparatus or because the first arriving officer robbed the sprinkler system of water by supplying hose lines but not the sprinkler siamese, this is noted and recorded.

I can't help but think fire chiefs also prefer a frank, straightforward treatment like this. If something is wrong, they want to know about it and correct it, whether it is weak manning, faulty generalship, or something else.

The system is still new but already useful

As a further word of explanation, I believe our tabulations represent a fair cross section of the fire factors on a nationwide basis. We don't claim that we get a full and complete story on every $100,000 or larger fire that occurs in the United States, but we do get enough, I believe, to reveal certain conditions and to draw certain conclusions. With some 30,000 reports received so far, we can, by a push of a button, observe trends such as the reduced number of apparatus failures as mentioned, and we can also assemble for skeptical individuals evidence that certain good fire protection practices are necessary, as proved by actual fires. What better evidence is there to show a group of building officials, for example, that lack of parapets on fire walls was one of the main factors in causing certain recorded large fires, or, if you will, a certain percentage of the total fires.

"Fire department" is a major category

Of the total fire reports in our files, there are 1200 instances in which fire department deficiencies of one kind or another played a part. These 1200 don't seem like very many considering the thousands of reports received. Maybe we should take comfort in this—and maybe not. I don't know if these 1200 fires were million-dollar fires or not, but if they were, the aggregate loss is over a *billion* dollars—and there's really not much comfort in that!

If I may emphasize a point, when I mention the fire department as a factor contributing to large loss fires in 1200 instances, I don't necessarily mean the *sole* factor. For the same fire, there usually are other factors—in some cases a weak water supply, in others a delayed alarm—or possibly a highly vulnerable type of building—and perhaps *all* of these.

As relating to the fire department, the factor or greatest frequency was *not* low manpower as you might expect. It was not lack of apparatus either. But in 220 of the 1200 instances, it was *lack of equipment* (or defective equipment) *on* the apparatus. It was lack of hose, gas masks, self-contained breathing apparatus, forcible entry tools, turrets and other heavy and special stream devices and emergency equipment.

It is surprising to find that a town (and so many small towns are doing it) will buy the biggest pumper they can—A 1000 or a 1250—and yet not provide the turrets and other powerful stream appliances needed to make use of that capacity—sometimes not even enough playpipes and nozzles.

The fad today too often is a whale of a big pump, an oversized water tank, and preconnected 1½" lines. Not that I am criticizing a good-sized tank and small stream equipment. They are vital. But is it consistent to have a pump capable of supplying 4 or 5 standard fire streams and at the same time provide tools and equipment that can develop only a quarter or half of this? Is it not like fitting a razor blade to the handle of an axe and telling the woodsman, "Chop down that tree!"? Let's use the good space on our modern apparatus to provide the powerful and special stream devices, and the emergency equipment for combatting not only the blaze in the private garage, but the inferno in the local super market.

Officers in charge

The fire department factor of second greatest frequency responsible for large loss fires is *"officers in charge"*—the faults chargeable to officers. Sometimes these are due to inadequate officer training, poor discipline, lack of accurate knowledge of the burning building, or lack of knowledge of an additional water supply close at hand.

An example of "officer failure," as we could call this factor, is the fumbling of a first-to-arrive company at an early morning blaze in a beet sugar refinery. The officer directed that (in the absence of public fire hydrants) a line be laid from a private yard hydrant to the end of the building not yet involved in fire. The hydrant was operated and the men waited expectantly for the hose to fill. They waited—and waited—but not a drop of water showed up at the nozzle. So the officer, in desperation said "use the tank" and the 300 gallons in the apparatus tank were used—not on the building, but to cool off a nearby molasses storage tank that was getting hot. When that was used

up he suddenly remembered the plant water reservoir and a line was laid 500 feet from the corner of the building, with the pumper taking suction from the reservoir. By the time water reached the fire, 9 costly minutes had passed. And it was 9 *more* minutes before plant employees arrived and told the fire department about the private fire pump in the plant. This pump was started, hose lines were then laid, and streams directed (for the first time) toward the east, west and south sides of the building. But by that time the roof had collapsed and the building was beyond saving.

Here is a case where the flick of a switch could have done much to save a building. The failure lay in the officer's not knowing about that fire pump, and he did not know because his department made no pre-fire inspection of the plant. Here is an item that costs little or nothing to correct—and is the second most frequent fire department factor in making its appearance in the analysis of large fires:

Faults chargeable to the officers due to lack of knowledge and lack of training.

Personnel

The fire factor showing up No. 3 in frequency is *"Personnel"*—inadequacies in fire department personnel as distinct from the officers. This factor, constituting 168 of the 1200 total, includes instances where apparatus arrived at the fire undermanned.

In one small town a building containing stores, apartments and a bus repair garage caught fire. A mechanic working beneath a bus discovered it and promptly gave the alarm. The fire department responded without delay but with only 3 men. When the firemen opened the back door and saw the extent of the fire, they connected to a hydrant and a hose line was brought in. The 3 men fought a pitifully losing battle, being unable to operate as a really effective company. By the time the off-shift firemen arrived, the fire had gained such headway that, in the words of the report, the fire "was fought from the rear and was pushed to the front of the building with involvement of the whole structure." There just weren't men enough for a flank attack or a frontal attack or an attack, period—showing again that it's useless to send a boy on a man's job—or to send a 3-man company to a 4-alarm fire.

Poor generalship

The *fourth* most frequent fire department factor involved in large losses is *"poor generalship,"* responsible in 134 of the 1200 cases. This means how well the fire fighting was directed. Let me hasten to say that I am not a fire chief and I will be the first to admit that Monday morning quarterbacking in an office chair is a lot easier than giving the right commands and making all of the correct decisions during the stress and strain of a holocaust. But the fact remains that errors in human judgment do occur on the part of a fire chief during a fire just as they occur on the part of a commanding general during a battle. And these errors can often be detected by careful observation and analysis, during or after the fire. Some common errors that have appeared under "poor generalship" are these:

1. Direct hydrant streams were used instead of connecting the pumper to a hydrant.
2. The chief did not size up the fire properly and failed to call for additional help.
3. The air conditioning system was not ordered shut down, thereby expediting spread of the fire.
4. Firemen lost their lives because of the chief's failure to recognize the imminent collapse of a fire-weakened wall.

One example of poor generalship is the case of an amusement park fire to which several different fire departments responded. No one person assumed command to direct fire fighting operations but each of the seven chiefs was left to his own resources, resulting in confusion, poor coordination, and a quarter-million dollar loss.

Most reports are complimentary

These fire reports may appear to you to be somewhat presumptuous and often critical, and it may look as if they are always filled with nasty remarks such as the "chief ran out of gasoline" and "the firemen left all their spanners back at the station." Far from it! If I were to "accentuate the positive" (which I would find more pleasant) and report only the favorable factors in these reports, I would write volumes. A great many of these reports, especially those I've seen in our Pacific Coast Inter-Mountain territory, make references like the one stating "the fire was extinguished by a fine display of skill, courage, and hard labor." In such fires—and there are many—the fire departments deserve nothing but praise for their excellent work. In studying the other fires, where unfavorable or unfortunate factors occur, I hope that they can be used in a constructive way to focus attention on certain areas of weakness you may find in your department, and that means of improvement may thereby be suggested. We can all benefit from the experience of others.

Other fire department factors

There are several other fire department factors that appear in the large loss analyses. One is *lack of apparatus*—inadequate pumpers, ladder trucks and other vehicles. This deficiency is hardly justifiable when one considers that, in full-paid departments at least, a mere 5 per cent or so of the fire department budget goes for apparatus. Considering the high cost of manpower today, it is foolish not to provide the best of equipment for the men. Even a casual observer might well say, "You can't afford *not* to have enough apparatus."

The factor of *inadequate training* or inadequate training facilities is a vital one. You may be surprised that I haven't mentioned it earlier. The reason is that training is actually reflected in several other factors, such as: officer failure and poor generalship, already mentioned. Then too, training enters into other items that we have chosen to list separately, as misuse of automatic sprinkler systems and misuse of fire department pumpers.

There are some factors partly responsible for large losses that the fire department usually has no direct control over, such as traffic conditions and inadequate and untrained private fire brigades. "Traffic conditions" include rush-hour traffic, flooded areas, ice and snow-covered streets, fog, railroad grade crossings, and even delays caused by parades.

Summary

To summarize my text I submit to these points:

1. The large loss fire is a national problem and is, or will be, a problem in your community.

2. This multi-million dollar [illegible] needs more attention than it is g[illegible].

3. The studies made by the National Board on why small fires get big may be of help to the fire service.

4. Some factors responsible for large loss fires are beyond direct control of the fire department.

A few examples are: Inadequate Water Supply, "Fire-Trap" Construction, Delayed Discovery, and Delayed Alarm (but the fire department can exert influence to improve these features).

5. A number of fire department factors entering into large fire losses can be corrected only by sizeable expenditures, such as:

Bring up to standard a *badly* undermanned or *seriously* underequipped department.

6. Many fire department factors are not only correctable but are correctable at little or no financial outlay:

A few items of strategic equipment to provide heavy streams or to use in certain emergency situations may be all you need to avert your own million-dollar fire.

And if we want to apply to the fire department the *cliche* "The best things in life are free," we can have, without cost, just about all of the *training* we want.

A thorough training and instruction program will avoid costly mistakes brought about by poor knowledge of the building involved, the apparatus used, and the strategy of fire attack.

We really have to do some hunting to find an excuse for not making *some* headway in our fight against the big fire. It is a good old American custom to profit by our past mistakes—to learn as much as possible from the school of experience. It is true that the lessons are expensive; An annual tuition fee of several hundred million dollars is not peanuts. We can't expect to graduate next year—but perhaps we can pass the tests that are ahead and make it into the next grade. □□

The Invaluable "Walkie-Talkie"

Is the Portable Unit an Underestimated Asset for Fire Service Communications?

By DONALD M. O'BRIEN

Baltimore County Fire Department members practice with portable radios during drill at Towson, Md., training grounds, as shown in this illustration where one man is operating from roof of the tower (above) while a second man talks from the tip of the aerial ladder fly (below right) —*Bendix Radio photos*

WORLD WAR II, and particularly the Blitz on London, may be said to have inspired serious consideration by the fire service of the portable "pack set" radio, more popularly known as "walkie-talkies."

"Wireless" as it is termed by our British cousins, was employed by the British armed forces, and was known to that nation's fire services before the war, but firemen made little comprehensive effort to employ radio of any type in fire fighting until well into 1943. As late as 1944, in fact, radio communication between mobile units of England's National Fire Service was limited almost solely to marine units.

In September 1943, when Britain was thoroughly aroused to the need of improving its communications on the fire front, an expert on radiophone communication, and a member of the British Central Scientific Agency, Mr. Hopkins, was sent to this country to study the progress made here in the application of two-way-radio—primarily the portable walkie-talkie types.

Official Washington placed all available information at Mr. Hopkin's disposal, and shepherded by a member of the Fire Defense Section of the national Office of Civil Defense, Mr. Hopkins visited certain fire departments of this country, which had experimented with portable radio units. At the time of his visit wartime restrictions had practically halted developments and only one city, New York, was going ahead with its experiments and these were being conducted by the fire department's own technicians in its own radio laboratories.

By personal order of the then Mayor Fiorello LaGuardia, Mr. Hopkins was given demonstrations of these fire department sets. He returned to England with the complete picture of not only the type of mobile and portable radio equipment, including walkie-talkies and handy-talkies in use and being developed for the fire service of this country, but also with a clear picture of the ways in which such radio facilities were utilized by our own fire forces.

The extent to which this information was valuable to Mr. Hopkins and the National Fire Service is conjectural; that the N.F.S. did shortly inaugurate two-way radio in some measure and it was at least partially successful is fact, as recounted in an article by FIRE ENGINEERING of September 1945, quoting a report in the British publication *Fire Protection* of July of that year.

After the conclusion of the war, several American fire departments, as well as a number of radio manufacturers, continued their efforts to develop practical, efficient portable radio sets. In New York the two radio experts of the Fire Department, Samuel Harmatuk (now Lieutenants, N.Y.F.D.) and Arthur Myerson, who built the first practical fire department "back-pack" portable two-way radio units, renewed their experiments, even after the fire department laboratory was discontinued. When the department finally decided on radio in a big way, the knowledge gained through their experiments served as a guide in determining the specifications for the department's radio equipment.

While these developments in the mechanics of radio itself, including portable pack sets, were taking place even more important progress was being made in another direction. This was in the field of radio frequencies.

To better understand the portables it is well to have a grasp of the events leading up to their almost universal recognition.

Special frequencies allocated

When in the early 1940's the Federal Communications Commission allocated certain radio frequencies for the sole use of the fire service, the possible employment of portable equipment was not forgotten. The International Association of Fire Chiefs and the International Municipal Signal Association jointly recommended that special frequencies be set aside for the low power units. As a result, 33.42 mc, 46.30 mc and 153.83 mc were designated for equipment with a maximum plate power input to the final radio frequency stage of three watts.

By authorizing separate frequencies for the portables, a method of preventing higher power base stations and mobile units from interfering with the walkie-talkies was thus made possible.

The joint committee on frequency allocation for the IAFC-IMSA stated, "These low-power walkie-talkie frequencies will be allocated on a state basis so that all fire departments, regardless of their base and mobile frequency, can be mobilized at a given point on large fires and a radio coordination service established. This will prove very effective in mutual aid work and in time of natural disaster when large numbers of units from different departments are called for assistance. It will also prevent the disruption of station to mobile service when pack sets are in use at a fire."

The committee was looking forward to the greater use of radio in mutual aid when it made this statement. It forecast the problems that would appear when

a number of departments would be working together and at the same time be unable to make effective use of radio because of the different frequencies in use. By offering a suggested method of operation, using the portables, the problem was brought into focus before any serious consequences could result.

Additional cost early deterrent

The most frequent objection to the suggestion of the committee had to do with cost. In order to fully implement the plan and at the same time obtain greatest benefit from the portables, it was necessary to purchase a minimum of two units. Many departments felt that a single unit, operating on the mobile and station frequency, would satisfy the requirements and eliminate one additional portable. The mobile units at the scene could maintain contact with the portables without any difficulty and at much lower cost. The possibility of coordination at large-scale fires or disasters was overlooked or ignored.

In some areas an attempt was made to organize radio networks involving many departments at a minimum cost and at the same time keep within the spirit of the committee. The base station frequencies were so selected that a common mobile frequency could be used by all departments. All portables could then be operated on the mobile frequency and the requirements of liaison would be maintained without requiring the purchase of additional portables. The mobile units were to be equipped with switches for quick choice of operating frequencies. In this manner, portable operation was facilitated without the loss of interconnection between departments. This method appealed to many of the departments which lacked sufficient funds.

As with most compromise solutions this also introduced another drawback in that all mobile units would be operating on the same frequency in case of a mobilization and unless strict control was exercised chaos might easily result.

There you have the highlights of the introduction of the portables. In order to appreciate the importance of the instruments to the fire service it is advisable to review their advantages.

Portable radio units provide Baltimore County, Md., fire fighters with direct communications from fire scene to chief in charge. Reports from company officers on type and extent of fire enable commander to quickly deploy his forces—*Photo courtesy Motorola*

Many advantageous uses

Time is of the essence in fighting fire. Many chiefs who, in the past have been plagued by the loss of time associated with the foot messenger or the lack of lung power, were quick to adopt the portable radios. Previously, messengers were required to carry reports and orders to all parts of the fire ground with the result that operations were necessarily slowed. If the chief officer in charge decided to conduct a reconnaissance it meant additional time lost if messengers were required to locate him during these movements. By use of the portable units it is possible for the commanding officers to receive reports and issue directions while moving about without fear that some important decision will be delayed by their movements. This flexibility of command has greatly influenced fire fighting methods of today.

When fighting fires in tall buildings or in subcellars the advantages of the small radio units are readily ascertainable. No longer must men risk collapse rushing messages up and down stairways or ladders. Today the information can be quickly given to the chief and he can weigh the facts before committing his forces to an operation.

Orders to the fire forces deployed on the fire ground can be issued to all simultaneously by means of the versatile units or specific instructions can be given to the individual units. This has been found to be particularly advantageous in passing orders to pump operators who may be located some distance from the fire scene as in relay operations. While some of the smaller portables will have restricted range in certain types of buildings and locations, in general, most of the newer models give excellent results, even under adverse conditions. The small sets have proved of great help in tunnel, bridge and marine fires. These operations pose difficult communication problems but are usually met successfully by the use of walkie-talkies.

Rescue and ambulance companies have found many and important uses for the compact equipment, particularly in accident control and life saving. A study of water rescue methods used by the fire service which appeared in the July 1956 issue of FIRE ENGINEERING, showed that many departments use the portables for coordinating water rescue activities. By their aid, boats may leave the shallow water and operate at distances remote from the shore. The portable lends itself readily to operations where all equipment must be compact and easily handled. Quite a few chiefs have reported that walkie-talkies were standard equipment for their boats and tend to increase efficiency.

Widely used by foresters

Getting men and materials into position and holding a fire line has always been time-consuming in fighting forest fires. Maintaining control over men in widely scattered locations has been a major problem and it has been difficult to obtain concerted action or quick movement. Lives reportedly have been lost in the past due to the failure to reach the threatened fire fighters with information on changes in fire behavior in time to direct their safe removal.

Portable unit pinch-hits for mobile installation during pumping operation. The versatility of this unit makes it a valuable addition to the Downingtown, Pa., Fire Department —*Photo by Walter Shaw*

The portable units are widely accepted and used by the forestry service as a logical means of overcoming these handicaps.

Radio inspection aid

Field apparatus radio inspections are becoming very popular in the fire service. By the addition of a portable unit to the inspection team, the fireman left at the apparatus can quickly pass along all radio messages of importance. If the inspection group is required to report to the truck for response to a fire within the district, the orders can be given quickly and the inspection halted without confusion or disturbance to the workers in the building as might be caused by resorting to the siren to summon the crew to the apparatus. A more rapid response is possible by this means.

Effective in training

Many fire instructors use the portable radio units as effective tools in their training programs. Control of operations involving long hose lays or multiple pumpers from a remote point, saves time formerly wasted in sending orders and instructions to all concerned. Evolutions at drill towers or in buildings can proceed much more effectively when these units are used. The time saved in relaying instructions by messenger can now be applied to better training.

Teaching radio procedure to firemen should be an important part of the training curricula. Unless all men are ac-

Orders to charge or shut down lines, change pressures or pick up can be given to pump operator by officer directly from scene when portable radio such as used by this Downingtown, Pa., crew is employed
—*Photo by Walter Shaw*

quainted in the proper use of the devices, confusion can result at the most inopportune time. The average fire fighter seldom realizes that most radio channels can be likened to a vast party-line telephone with about the same amount of privacy. Until this fact is brought home to the men by proper instruction, the most efficient use of radio will not be obtained.

To assist in familiarizing men with actual on-the-air operations, good use can be made of the portables. All of the small units have a restricted range due to their low power and the less efficient antenna required by the circumstances of compactness. An instructor may take advantage of these apparent shortcomings to give instruction and practice without undue interference to other vital traffic. By selecting a building that tends to decrease the range of the units, practice transmissions can be carried on and the men can gain practical airtime experience while learning procedure.

Equipment varies

The popularity of the portable unit has led to several important developments in the field. The manufacturers have followed closely the likes and desires of all users and as a result several variations of products are available.

Power output of the transmitters has increased from the original fraction of a watt to one and two watts of the present units. Versatility has been further increased by the adaptation of the loudspeaker to give greater output from the audio section of the receiver and overcome the objection of the hand-held earpiece common to some styles. The small, shoulder-strap-carried models were marvels of compactness, and the modern units develop this feature still further. Many fire officers incline toward the back-pack type because it frees the hands of the user when necessary. Both types are available today.

The use of the transistor has insured even greater compactness and this in turn has resulted in a greater selection of power supply possibilities. One of the early complaints against the small unit was the short life of the battery pack. Engineering advances in this field now insure many hours of hard service.

Emergency networks possible

For floods, hurricanes, train wrecks, building collapse and other emergencies it is sometimes convenient to set up a complete network of portable units. Under such conditions the equipment may be used more or less continuously and battery failure for the control unit may be expected as a result. The use of snap-on power units for 6-volt or 12-volt d.c. operation and 110 a.c. operation has largely overcome the short life characteristics of the dry cells normally used in power packs. They also permit adaptation to a vehicle electrical system or to the common electrical power outlet. Long sustained operations present little difficulty under these conditions.

What of the future?

That the portable walkie-talkie has not even approached maturity in product design and engineering, as well as in its application, is generally admitted. It is safe to expect that developments within the next decade will at least equal those accomplished in the last ten years. But this is no reason for delaying adoption of the portables. They can well pay for themselves long before it is time to replace them.

Already light, tiny units are being tried as an integral part of firemen's helmets for possible person-to-person communication.* It is entirely conceivable that the fire fighter of the not too distant future will carry his own portable radio similar to Dick Tracy's famous wrist radio. A collateral innovation will be the further development of the compact, self-contained, portable television cameras, to make reconnaissance and further guide fire control operations in the field.

Selection of equipment

Fire chiefs contemplating the purchase of portable units will find that there are several makes and models available. Preference for the hand-carried, shoulder-carry, or back-pack model should be dictated by the conditions that the department must continually face. The shoulder-carry type seems to be preferred for general operations but the back-pack style offers advantages where long travel distances and labor are involved. The choice of power supply also should be based upon individual conditions. The modern dry battery pack has a much greater life expectancy than previous models, but requires that replacements be kept on hand.

The new wet-cell rechargeable batteries offer long range economy of operation and eliminate the drawbacks of the older type lead-acid cell. However, additional equipment must be maintained for recharging purposes. Chiefs will do well to consult other fellow chiefs who are using the units to gain the benefit of their experience and advice. The aid of sales engineers of the radio manufacturers and distributors will also be of assistance.

In some areas of the country advantage has been taken of the Civil Defense matching funds program for obtaining the necessary units at a reduced cost. Usually this is done as a part of a master communication plan, designed for the purpose and automatically assures that the proper frequencies are obtained for liaison in case of a disaster involving Civil Defense and the Fire Service. A word of caution may be appropriate at this time about the recent announcement that surplus government property will be available to Civil Defense agencies. For the most part such radio equipment as may be available is of military style and does not meet fire service requirements. All radio units for use on the public safety frequencies must be "type-approved" by the FCC and the purchase of standard designs will assure prior approval. □□

The Mason City, Iowa, Fire Department uses and approves walkie-talkies. Chief Boyd Arnold reports that the use of the portables has brought coordination in fire fighting operations that was not possible before their use—*Motorola photo*

* The idea is not new. FIRE ENGINEERING of April, 1946 told about an Atlantic City invention along this line.

Pride of the Baltimore Fire Department's fireboat fleet, the "Mayor Thomas D'Alesandro, Jr." undergoes trials on the Delaware River

Baltimore's New Fireboat Fast, Powerful, Maneuverable

The "Mayor Thomas D'Alesandro, Jr." Can Discharge 12,000 Gpm while Moving at Full Speed of 17 Mph

THE NEWEST ADDITION to the nation's fireboats was accepted by the City of Baltimore and its fire department on September 14, 1956, with fitting dedication ceremonies at the quarters of the Fireboat "Cataract," Pier 7, Baltimore.

Saluted by all harbor craft, and with Niagaras of water thrown skyward by escorting fireboats of the fire department's marine fleet, the new acquisition proceeded up the harbor with notables of the city government, fire department and its builders aboard to the pier, where she was met by a large crowd of assembled guests, including Maryland's Governor, Theodore R. McKeldin, Congressmen Edward A. Garmatz and Samuel N. Friedel, members of the City Council, Fire Commission and others.

Among the attending visitors were Deputy Fire Commissioner and Chief George E. Hink of Philadelphia; Chief Millard H. Sutton, District of Columbia Fire Department; Chief Anthony Orban and Deputy Chief Lee Cocky of the Baltimore County Fire Department; former Baltimore Fire Chief Howard Travers and the editor of FIRE ENGINEERING, Roi Woolley.

Following the dedication ceremonies and inspection of the vessel, a buffet luncheon was served.

Based on performance tests, the "Mayor Thomas D'Alesandro, Jr." has exhibited unusual maneuverability, speed, power and pumping capacity, all achieved at an unusually moderate price.

The 103-foot fireboat was designed by Thomas D. Bowes, noted Philadelphia naval architect and engineer, and built in the Camden, N. J., yards of the RTC Shipbuilding Corp. Powered by a pair of 660 hp Fairbanks-Morse diesels, the twin-screw vessel ran a measured mile at 17 statute miles per hour smoothly and without vibration.

An important feature of the new boat is her ability to maneuver at full speed, utilize full power to tow a burning or disabled ship, and at the same time to deliver full volume of water (12,000 gpm) to fight the fire. A separate pair of diesels drives the Fairbanks-Morse fire

Continued on page 1070

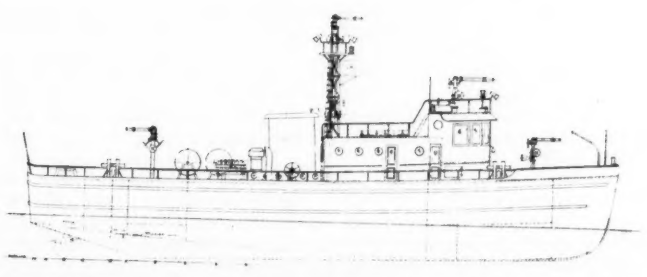


Diagram silhouette shows lines of new boat with location of turrets, mast, hose reels. Loud speakers are carried on the mast

OVERHAUL AND SALVAGE . . . IN THEORY AND PRACTICE

By ROI B. WOOLLEY

Some extensive roof openings may best be covered on the exterior as in the case of this Cincinnati, Ohio, home. Note extensive use of tarpaulins and the way they are tacked down
—Photo courtesy Cincinnati Underwriters Salvage Corps

PART XVIII

Post-Fire Salvage: Covering Exterior Openings

IT HAS BEEN WELL SAID that post-fire salvage operations are of almost equal importance to those carried out during the fire itself.

The business of restoring fire, water, and smoke damaged property to as near its original condition as possible, entails care, drudgery and effort; moreover, it calls for skill based upon knowledge and experience.

Some of the post-fire salvage problems have already been discussed in this series, notably dewatering fire-damaged buildings. But there are other factors which deserve more than passing mention. It is the purpose of this chapter to review these.

It should hardly be necessary to attempt to itemize all of the many tasks and operations that come within the meaning of post-fire salvage. They can be as many and elaborate as the local salvage squad wishes. However, they must—even where the spirit and flesh are willing—be limited somewhat by the nature and extent of the fire and attendant damage to the building, its contents and outdoor storage. Each salvage operation must be considered and treated on its own. Obviously, the treatment extended a dwelling will not be the same as that which is called for in a large warehouse or manufacturing plant, even if sufficient manpower and facilities are available for the latter jobs.

This installment deals with one of the most common applications of post-fire salvage, that of covering openings, particularly those which have been made by the fire itself, or by fire fighters in their fire extinguishing operations. Emphasis, naturally, is upon roof and wall openings, such as windows, louvres, ventilators, etc.

Fire extinguishing operations frequently necessitate cutting open roofs, breaking out windows and ventilators, doors, and other openings for purposes of rescue, or fire extinguishment, or both. Inasmuch as in most fire control operations, ventilation begins at the top, it is the roof that is the heaviest sufferer. Also, the percentage of roof fires, particularly in the dwelling classification, is high. It is as may be expected, highest in those areas where the wooden shingle still offers food for fire extension.

Salvage should go all the way

According to the late Chief Frank C. McAuliffe, whether the fire or the fire fighters open roofs to the weather, it is "essentially poor practice for a department to salvage a stock of merchandise or household furnishings and leave them exposed to be destroyed by the elements later."

The procedures for covering roof openings depend upon a number of factors, such as the type and kind of roof, its supports, the extent of the openings, the weather, and the available facilities with which to perform the salvage operation.

It is considered requisite by the modern salvage squad or corps to carry some material for covering roofs and other openings.

The important items for such tasks are tarpaulins or other suitable waterproof covers; tar paper, bundle of lath, nails, shingles, etc., and hammer. Roofing ladders are essential to many roof closure operations.

Although Underwriters salvage units include such equipment on their apparatus, many fire departments are loath to to carry it on vehicles which may already be loaded to capacity with other essentials. Under these conditions, some departments maintain a small stock of such facilities at the fire station or municipal shops, drawing from it as occasion demands. This procedure is generally acceptable because post-fire salvage of this nature is seldom of sufficient urgency to require having all salvage materials immediately available.

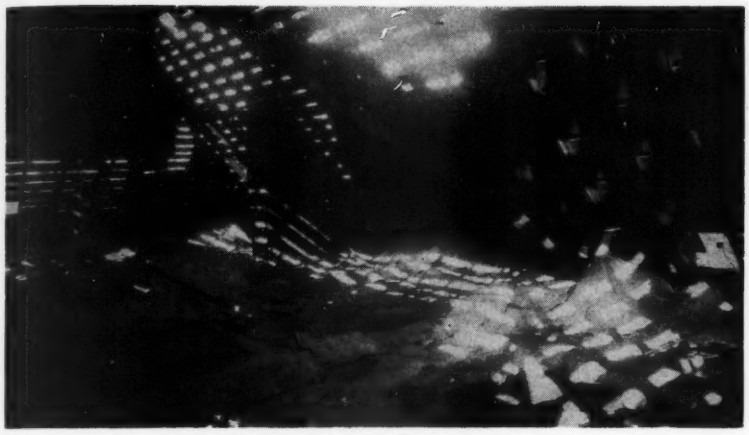
It is said that in a few large places, where salvage work is performed by the department and not by Underwriters insurance units, the fire forces do not attempt this type of post-fire salvage, leaving the problem to other municipal agencies or to private contractors.

In a number of volunteer departments, local lumber dealers, or building contractors, willingly furnish the fire force with tar paper and lath, on the theory that it may lead to repair orders from owners of damaged property. From the information at hand, the amount of material actually used by the average fire department in post-fire salvage (beyond the use of covers) is not extensive and the cost is trifling compared with the good will which is developed.

Cover rental

Where covers are used for post-fire protection of property, it may mean tying up departmental salvage facilities for some time until more permanent repairs can be made. Obviously this condition is a handicap for the fire department, which desires to restore its salvage materials to service as quickly as possible.

Some departments have adopted the practice of making a minimum charge for use of salvage covers over and beyond a certain time limit. No charge is



Where roofs are badly burned, instead of attempting to cover the entire roof, tarpaulins may be placed over attic floor and the accumulated water chuted outside, as was done in this dwelling fire

made for the temporary closing of openings by tar paper or other means.

Salvage companies operating under the jurisdiction of insurance Underwriters generally make it a regular practice to charge for services and the use of covers after fires, and for certain salvage services other than fire.

In most instances, these charges are made after a specific period of time following the fire which allows the owners to make temporary or permanent repairs.

In extenuation of this policy Chief McAuliffe and other salvage experts state that the practice is necessary because they have found that persons take advantage of such services when rendered gratis and are therefore inclined to delay in making repairs.

In further extenuation of this policy, it may be pointed out that covers used and left on roofs, or over outside stock and material after fires have been extinguished, are subject to unusually hard wear and require constant attention in order to prevent ruthless destruction or loss through carelessness or theft.

In addition to this, fire departments are often confronted with requests for covers to be used as protection against rain, windstorm and other types of damage not directly related to fire. Some of these requests are justifiable and legitimate, but some are unreasonable and unnecessary, and fire chiefs are often placed in embarrassing situations when they are obliged to decline to refuse these requests for assistance. Obviously, some sort of plan is called for to meet these contingencies. Making a small charge for the services is one solution to the problem.

Again quoting Chief McAuliffe, "in order to avoid complications, it is rec-

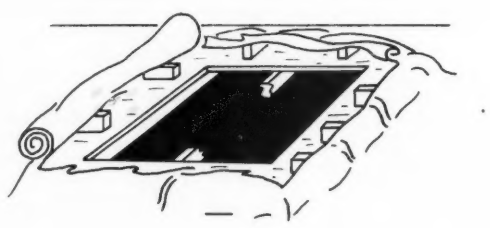


Fig. 1. Roof covering around the edge of a flat hole should be chinked up about three to five inches to deflect water around the opening. This may be done by forcing bits of wood, brick, etc., under the roofing material as shown here

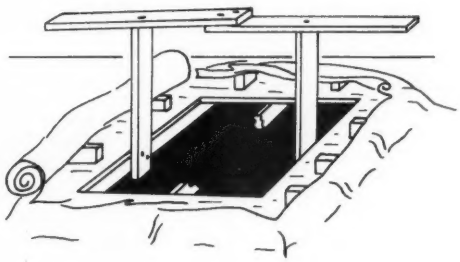


Fig. 2. Pieces of wood sheathing or the like, may be used to build framework to support covering material well above roof to facilitate drainage

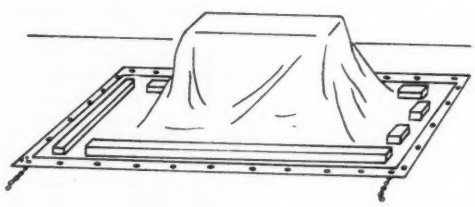


Fig. 3. Cover placed over framework should be fastened down securely by means of wood strips, bricks or other weights

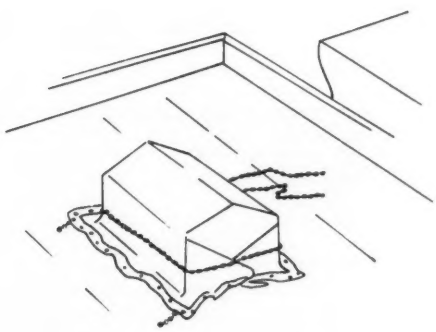
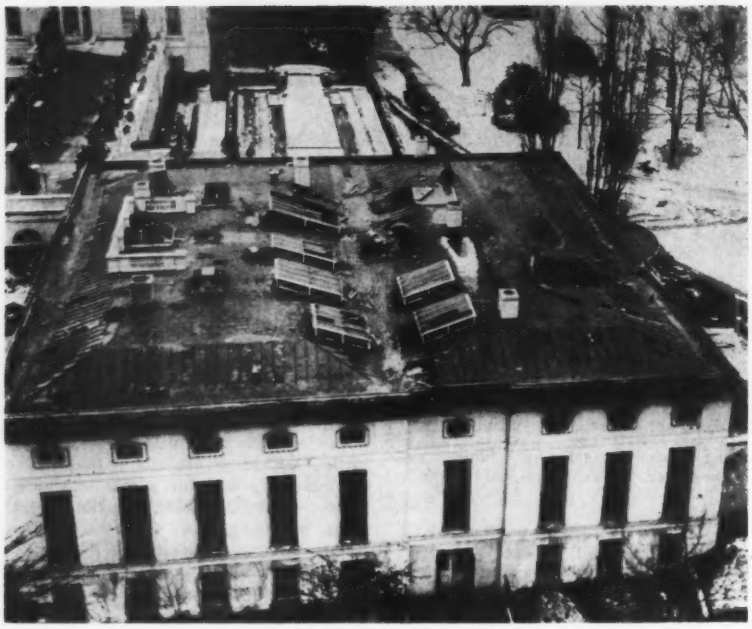


Fig. 4. Ventilators, bulkheads, etc., which are raised above roof level may be covered in this manner. If rope or chain is not available, cover may be fastened as in Fig. 3

Courtesy Official Training Guide, District of Columbia Fire Department



Multiple roof openings may present serious closure problems, as was the case years ago when fire damaged the White House Executive Offices in Washington

ommended that a form of minimum cover rental be instituted in those departments performing salvage service. This procedure will discourage unwarranted requests for covers and services and also will facilitate the quick return of covers spread at fires. Moreover, it will produce a saving not only on the wear and tear of covers, but also in man-hours of work."

It should be added that this method of charging for protracted use of covers applies to all forms and conditions of usage, not merely for protecting outside openings or stock.

How this revenue is handled is a matter for the local department to decide. In some departments revenue so received is turned over to the department pension funds. In others it is used to purchase additional equipment. Some cities have ordinances making it mandatory that such receipts shall be placed in their corporate fund. Chief McAuliffe advances the following "guide" for departments having no definite rental system:

1. A cover rental charge should be made when covers are used over five days after any fire. This period will allow ample time for owners or occupants to provide either permanent or some other temporary protection for their premises.

2. A rental charge, together with charge for actual cartage and labor involved, should be applied where covers are used to reduce damage from leaky roofs, breaks in plumbing or heating piping, windstorm and other causes not incidental to fires or fire protection.

3. No charge should be made for covers loaned for charitable purposes, but fire departments should work out arrangements in advance for indemnification for loss or damage to their covers in cases of this kind.

SUGGESTED FORM OF AGREEMENT

Date_____ Time_____

M_____

_____

We have left _____ covers at _____ which will be removed within _____ hours _____ days from above time and date. Should you desire them to remain after that time a charge of (fifty) cents per cover per day of 24 hours will be made. Kindly execute the attached form of agreement and send same to _____

_____

I hereby agree to pay to the _____ immediately upon presentation of bill, for the use of _____ covers at _____ (fifty) cents per cover per day of 24 hours or fraction thereof after _____ M_____

_____

Date_____ Signed_____

Covering roof openings

A small opening on a sloping or pitched roof can readily be protected by tar paper placed over a simple framework of wood boards to act as a temporary sheathing, and then covered with tar paper which is stretched lengthwise across the hole, starting at the eaves. If more than one strip of tar paper is required, the upper strip is lapped at least six inches over the one below. At the top of the burned opening the roofing material can be pried up and the tar paper inserted underneath, after which the roofing is fastened down with large headed nails. Wooden strips or laths, are nailed over and around the edges of the tar paper to hold it fast against the wind.

This same procedure may be followed if the opening is on a flat roof. In this case it is usually easier to fabricate the framework and locate it firmly over the aperture. The framework serves to raise the tar paper covering above the roof line and thus facilitate the run-off of any rain before the complete roof repair job.

Where a large hole has been made in a roof, it may be necessary to use one or more salvage covers for protection.* In this case, the procedure is the same as in covering with tar paper; the covers are stretched over the roof with the upper covers lapping lower ones at least six inches. The methods of lapping or locking covers were described in Part XVI of this series. Naturally, some framework must be provided to support the covers. For protection from wind and drafts the edges of the covers should be held down with lath or wood strips, making sure that the nails holding the strips go through the grommets and not the material of the covers.

To revert to the flat roof: Where holes are of some size, a somewhat different procedure is followed by many salvagemen. To keep out roof water, the roofing material is loosened around the hole and raised to a height of about four to six inches, where it is held in place by boards. A framework to hold the covers can then be erected over the hole. This is usually done by nailing short upright boards to the roof rafters at each end of the hole. These are connected with a crosspiece to form a temporary ridge pole. pole.

Other boards are nailed from this ridge pole to the burned ends of the roof rafters, and a cover is thrown over the hole. The edges of the cover are fastened down with boards nailed through the grommets, or are weighted with stones or debris.

Where the burned section of the roof is too large to cover effectively, the roof drainage may be diverted to the floor below, which is well covered after being

* It is advisable to use the oldest, most worn covers for this type of operation.

Salvage corps usually utilize old, repaired tarpaulins for closures, as was done in this Bond Store window in Cincinnati, Ohio, when a wind storm blew it out and threatened costly displays—*Photo courtesy Cincinnati Underwriters Salvage Corps*

cleared of furnishings, etc. The covers (it usually requires more than one) should be raised above the floor to provide a run-off which in turn may be directed through a window by means of a trough. If there is possibility of any leak through the attic floor, covers may be placed over material on the floor below and bagged to catch all drip that may seep through.

Consider safety factors

Before attempting any extensive roof or other post-fire coverage the officer in charge should survey all possible hazards to the salvage crews. Partially burned away roof members may weaken a roof opening which it is desired to cover, without the weakness being apparent, with the result that salvagemen may be injured through collapse of roof members, or the entire roof structure. Frequently the area around light shaft coverings and ventilators is burned away on the interior, leaving a serious structural weakness which may not be immediately apparent. Undue weight or shock to the area may cause structural failure.

As another safety precaution, it is advisable to mark all roof covering locations in some distinctive manner to prevent firemen or others from falling through them.

Another detail which may prevent injury to persons and/or covers is to clear the edges of windows, ventilators and covering to shafts that have been broken out, of all glass or other sharp protuberances which may injure persons or covering material.

As was pointed out in an earlier chapter, care in making roof openings at the time of venting may later facilitate exterior covering. Where care is exercised in making several small openings in slanting roofs (near the ridgepole) it may be possible to cover all such holes with a single cover by draping it over the ridge and securing the ends as previously described.

Covering skylights, air shafts and other roof openings, is generally accomplished by draping a tarpaulin around or over the framework of the opening and securing it by ropes, nailed lath or strips of board. Tar paper may be used for the purpose, where adaptable. In covering shafts it is well to remember that interior air currents, i.e., those coming up the shaft, may tend to damage or destroy the covering, as well as the wind-blown currents from above.

Covering window openings

Window openings are usually closed with tar paper, except in the case of large show windows in stores, large factory windows or picture windows in dwellings. In the latter cases, the use of a tarpaulin may be more effective although if wooden crossmembers of a window remain and offer nailing surface it may be possible to employ tar paper.

The tar paper is secured to the window frame starting at the top, by means of wood lath and nails. The lath and paper are then nailed on each side of the window and a sufficient amount of paper is allowed to project over the sill, before the bottom is secured with lath and nails. The projecting portion may help drain off any rain that falls before repairs are made. The lath acts as a cleat to help prevent the paper tearing away in windy weather. When nailing, drive the nails not over three-quarters of their length into the wood. This will facilitate their removal when permanent repairs are made. Incidentally, some departments prefer "scaffold nails," which have a double head. By driving the nail into the first head or "collar" a secure fastening is obtained, while the projecting portion of the head facilitates removal.

Tar paper is usually secured to the exterior of the window frame, although circumstances may make it necessary to fasten it on the interior, in which case care must be used to prevent needless damage to woodwork and trim.

Where tarpaulins are used for window covering, wood cleats may be employed to help suspend the cover over the window opening. Nails should only be driven at the grommet openings unless rough "roof covers" are used, and department salvage procedures permit nailing near the edge seams of the cover.

A number of salvage corps keep in stock sections of plywood taken from large old cartons which can be used to temporarily cover large windows and glass doors such as are encountered in mercantile establishments. If such waste material is not retained in storage, it may sometimes be procurable on short notice from local suppliers whose names, addresses, and telephone numbers should be kept on file.

Cold weather precautions

Covering openings that will expose building and contents to inclement weather is particularly important in winter time. This is both to provide protection against the elements, and to enable heating units to be placed in operation at the earliest opportunity.

By covering the tops of vertical arteries, roof openings and windows, heat can be provided for the lower floors, at least, providing the heating system is intact. If the nature of the contents indicate the need of it, portable heaters and salamanders can be located advantageously (of course, always under proper supervision).

Broken steam pipes or radiators should be checked and disconnected, and the pipes capped to permit partial operation of the systems. These precautions are especially important in occupancies such as wholesale markets groceries and shopping centers, where freezing of fruits, vegetables, bottled and canned goods may result in heavy loss.

Attention should be given sprinkler and other piping where the building may be left open to the elements, or where there is any possibility of freezing and bursting pipes (Treatment of sprinklers will be covered in a subsequent Chapter of this series). □□

Today's fire fighter wants a fire hose that is strong, tough, resilient; that stows and handles easily; that is resistant to abrasion and mildew and that will enjoy—and help him to enjoy—a long, useful life. Modern synthetic fabric hose provides him with such a facility —*Photo courtesy Committee on Firemen's Training, NFPA.*

The Place of Nylon in Fire Hose

More light on the part being played by synthetic fibre cord in modern fire hose

OUTSTANDING among the synthetic fibres to find their way into the fire service in one form or another, is nylon. Nylon rope has demonstrated its great strength and toughness in rescue and fire fighting operations. Nylon cord in synthetic tires, is speeding fire apparatus on its way. And now, nylon fibre cord is further lightening the load of the fire fighter—literally and figuratively by its introduction into better grades of fire hose.

The October issue of FIRE ENGINEERING traced the developments of synthetics in rubber and fabrics, as used in fire hose, and reported the opinions of representative fire chiefs throughout the land on the advantages and disadvantages of these newer fabrics, contrasted with good old "King Cotton"—which is still in there slugging—with emphasis on Dacron. Lack of space, however, prevented discussion of the other fabrics presently employed, and contemplated, by fire hose manufacturers. Therefore, to complete our study on the entire subject of synthetics in fire hose, FIRE ENGINEERING takes for its subject one of the important though lesser known of the synthetic fibres related to fire hose—nylon.

As in the October installment, the following opinions are those of fire chiefs in all population groups (1,500 to 1 million), who were asked to express the advantages and/or disadvantages encountered in the use of the synthetic hose—if they employed it.

As was pointed out, a quite surprising fact disclosed by the study was the large percentage of synthetic fibre fire hose now being bought and used by paid and volunteer fire departments, as compared with the previously popular cotton types.

Although the reports clearly indicated a preference for hose made of synthetic fibres, there were no voices raised against the old standby cotton rubber-lined double-jacket types, in the premium grades, at least.

Only one question among all those asked remained unanswered by respondents. This had to do with length of life of their fire hose. The almost universal reply of those chiefs who attempted to answer, was that when it came to synthetic fibre, they had not had it in use sufficiently long to determine its longevity.

However, the practically universal agreement on such factors as greater strength, freedom from wear and tear, less snagging, etc., all of which contribute toward long and healthy life in fire hose, clearly prophecy a bright future for the synthetics on this score. And nylon stands well at the top among the synthetic fibre hose listed by the respondents, Although possibly not as many manufacturers are at the moment including nylon cord in their products as they are other synthetics, nevertheless, the statements of users of nylon hose leave no doubt about their approval of it.

Strongest synthetic fibre

Nylon, a polyamide fibre, is perhaps the strongest synthetic fibre made by man. It has been estimated to be 200 per cent stronger than the best natural fibre now available. In relation to other man-made fibres, it is probably the most flexible and resilient and equal or superior

in resistance to abrasion, weight, compactness and other factors upon which hose jacket fibres are judged. In comparison to conventional all-cotton jacketed type, nylon hose is 15 to 18 per cent lighter in weight and its compactness allows it to occupy 35 to 40 per cent less space. Its strength and resiliency enable it to withstand much greater shock and abuse such as may happen when nozzles are shut off too quickly or hose clamps abruptly applied.

Weave a measure of quality

Although not expressed by respondents in so many words, reading between the lines of the replies to FIRE ENGINEERING's questionnaire, the conclusion is inescapable that it is not possible to manufacture good fire hose with inferior materials, although it is possible to produce low quality hose with the best materials. And on this score, perhaps a few words stating the position of one hose authority may be worth passing along at this point. In his opinion, one method of judging quality of fire hose is by the "pick" or number of filler threads per inch.

A high pick assures a hose jacket having a tight weave, which in turn, affords a smooth lining and waterway, with consequent lower friction loss. He explained that the cheaper grades of fire hose are made with a pick of between five to seven filler threads per inch, whereas good quality hose has a pick of approximately ten, while premium hose will have a pick of twelve or more.

Snagging of fire hose is always cause for trouble among fire chiefs. Several reports were received from chiefs—most of them from large municipalities where facilities were available for analyzing hose difficulties—complaining of snagging and raveling in their synthetic hose. Again quoting the above authority, a low pick may be the cause of this trouble. A loosely-woven hose jacket, he explains, invites this problem, and in addition, may result in displacement of the warp strands, leading to hose failure at the point of displacement.

His thinking is in line with discussions held by members of the sub-committee of the NFPA Fire Apparatus and Equipment Committee, during which the question of snagging as related to new synthetics was aired. There is as yet lack of sufficient concrete evidence to warrant the Committee—or other authorities—reaching any definite conclusions on this score.

Couplings play an important part

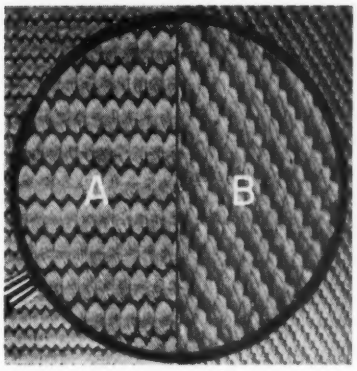
A few fire chiefs mentioned in their returns that it is more difficult to couple or recouple synthetic hose. Although specific information is lacking as to the cause of the difficulty, the trouble may possibly be traced to the use of couplings designed originally for all-cotton hose.

According to some manufacturers, synthetic hose requires modification in coupling procedures in order to make a secure joint. The use of man-made fibre reduces the bulk of the hose and adjustments must be made to accommodate this change. In general, the inside diameter of the coupling bowl must be smaller in order to obtain a firm grip, when coupling synthetic fibre hose.

One fire chief in his report said that couplings tend to loosen or tighten when the hose is under pressure. This drawback, some authorities believe, may be related to a loosely woven hose jacket. A closely woven jacket will tend to resist this serious reaction.

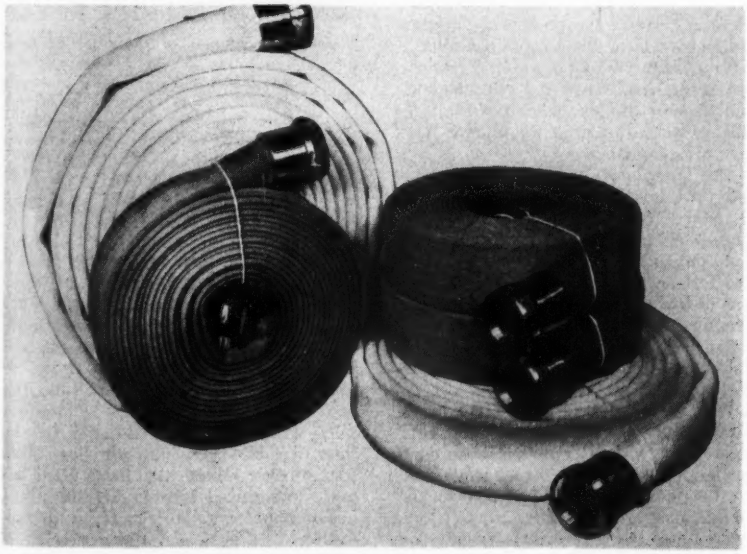
The experience of the fire service with hose employing nylon for the filler is disclosed by the reports to be similar in detail to the findings covering Dacron published in the October installment. The majority of chiefs who reported the use of nylon hose, stated that they liked the combination of this synthetic with cotton better than the all-cotton jacket. As with the advantages of other synthetic hose fibres, the most prominent comment was that fire fighters liked the nylon hose because it was so much easier to handle. Other advantages listed were light weight, compactness and flexibility, in that order. The findings also disclosed that in common with other synthetics, strength, resistance to mildew, and durability, were well up on the list of advantages.

From the host of replies and opinions expressed, it is evident there is some confusion in the minds of a few chiefs concerning different synthetic fibres, and their relation to fire hose. Perhaps the best solution to clear any misunderstanding or lack of information, is found in the words of one chief who said, "When it comes to which synthetic and how it is used, I leave it to the manufacturer who makes the hose to supply the material—and as long as I pick a reliable, well-known company, I don't worry about the outcome." □□



A. Ordinary type weave with cotton fibre.
B. Closely woven type with nylon fibre
—Photo courtesy Fabric Fire Hose Co.

The illustration shows the importance of a high pick count. The sample shown has approximately one-half the filler threads per inch of that of the best quality fire hose. The low pick count may be the cause of snagging and displacement of the warp strands, resulting in hose failure
—Photo courtesy Fabric Fire Hose Co.



Illustrating the comparative bulk and flexibility of nylon and cotton fire hose. In weight, nylon and Dacron fibre hose weigh 15 to 18 per cent less than premium standard cotton hose. In bulk, the nylon and other accepted synthetic types occupy 30 to 40 per cent less space than standard high grade cotton hose—*Photo courtesy Fabric Fire Hose Co.*

BALTIMORE FIREBOAT

Continued from page 1063

pumps, independent of propulsion engines.

The "Mayor Thomas D'Alesandro, Jr." is said to handle easily at full speed. On tests the vessel turned at full speed in a circle just one and a half times her length and made a crash reverse in less than two lengths.

The ever-growing tonnage handled through the world port of Baltimore calls for the best harbor fireboat protection available. Baltimore had not added to its fireboat fleet since 1921 and was placing dependence on four aging vessels, the diesel-powered "Cascade," a World War I submarine chaser obtained in 1921, and three old steam fireboats, the "Cataract" built in 1891 and rebuilt in 1914, the "Deluge" put in service in 1911 and the "Torrent" built in 1921.

Following a survey of harbor fire protection requirements, made by Baltimore Fire Chief Michael H. Lotz and Thomas D. Bowes, M. E., naval architect, Mayor Thomas D'Alesandro, Jr. and the Board of Fire Commissioners authorized the new fireboat.

Construction specifications

The survey indicated that the new boat should be capable of covering as much waterfront as any two of the old fireboats and the following characteristics were decided upon:

Type—Twin screw diesel fireboat
Construction—All welded steel
Classification—American Bureau of Shipping
Fire fighting characteristics — National Board of Fire Underwriters
Length over all—103 feet, 8 inches
Length between perpendiculars — 100 feet, 0 inches
Beam molded—21 feet, 8½ inches
Depth molded—11 feet, 11½ inches
Draft—7 feet, 8 inches
Water capacity—12,000 gpm at 150 psi
Foam capacity—320,000 gallons in 20 minutes
Speed—16 statute miles per hour
Propulsion bhp—1320 bhp at 1200 rpm
Pumping engines—Two 660 bhp or a total of 1320 bhp at 1200 rpm

Preliminary experiments by Professor Louis A. Baier in the University of Michigan Experimental Model Basin, indicated a possible speed of 17 mph if displacement could be held to 175 tons.

The engines selected were Fairbanks-Morse Model 38F5¼ opposed-piston diesel.

The four identical engines, each with eight cylinders, 5¼-inch bore and 7¼-inch stroke are rated at 660 hp at 1200 rpm. Included are Purolator fuel and bypass lube filters, Air-Maze intake air filter-silencers and full-flow lube filters, Kewanee-Ross oil coolers and heat exchangers, Fairbanks-Morse cooling water pumps and Woodward governors.

Total combined weight of all four diesels, including mounted accessory equipment and the reverse-reduction gears on the propulsion engines, is approximately 31 tons. This represents 2,640 hp.

The two propulsion engines drive 4-blade bronze Ferguson propellers through Snow-Nabstedt reverse-reduction gears with a ratio of 3.79 to 1. There are dual Westinghouse air brake engine controls in the pilot house and the helmsman has instant control of the vessel's power. The high degree of maneuverability of the boat is due in large measure to the special type twin rudders operated by a standard C. H. Wheeler electro-hydraulic, Rapson's Slide steering gear, powered by a variable and reversible piston-type pump. The Wheeler steering gear provides automatic and instantaneous hand steering in the event of electric power failure. Fire fighting potential for all-weather, round-the-clock service is enhanced by RCA radar and Motorola ship-to-shore telephone.

Plenty of pumping power

Next to speed and maneuverability is ability to throw water. Heart of the craft's fire fighting system is a pair of 10-inch Fairbanks-Morse horizontal split-case centrifugal fire pumps, each rated at 6,250 gpm at a discharge pressure of 150 pounds. Each pump is driven by its 660 hp Fairbanks-Morse diesel at 1200 rpm through an Airflex coupling-clutch. Together the two pumps provide an assured volume of 12,000 gpm whether the boat is standing beside a dock or moving with full speed and propulsion power.

Water is delivered at 150 pounds pressure to four big McIntire fire monitors, one forward, one aft, one on top of the pilot house and one on a tower rising 20 feet above the deck house roof (28 feet above the main deck). In addition, a special type valved manifold is provided on deck with ten 3½-inch outlets. With this manifold design, it is possible to run all hose lines off the bow, stern, port or starboard side of the ship without looping the hose. When it is not necessary for the fireboat to act as a pumping station, siamese fittings on each of the 3½-inch swivel ells permit 20 smaller hose lines to be operated.

The fire pumps may be put in series and pressure can be raised to 300 psi at reduced quantity, a desirable feature when the fireboat is pumping into shore high pressure fire mains. It is possible also for the boat to project 320,000 gallons of foam a distance of 120 feet in 20 minutes. Foam handling is fully automatic, being accomplished with a special Fairbanks-Morse rotary pump which proportions the foam liquid.

With all the power and fire fighting equipment,, there are ample quarters for eight men (with a complete washroom) in the forecastle and for a ninth man in the deck house. In addition to the roomy pilot house, a large combination lounge, galley and messroom is provided for the crew in the deck house, equipped with an electric refrigerator, electric stove, sink, drinking fountain and other facilities.

Provision of quarters for the crew is desirable because the vessel is manned 24 hours a day; thus the previous shore fire station can be eliminated. The new craft which will replace the old fireboat "Torrent," will effect other savings by eliminating the oil burned to keep up steam on the "Torrent's" boilers. With the diesels, the engines can be started in seconds and use no fuel until they go to work. All in all, fire department officials estimate that savings will pay the entire cost of the new fireboat in seven years.

The delivery price of the completed "Mayor Thomas D'Alesandro, Jr." ready for operation was approximately $550,000, said to be the lowest cost per gallon of projected water of any modern fireboat. □□

Iowa City Demand Masks "Pay-Off"

Investment in two demand type masks returned dividends of two young lives a short time after the units were purchased by the Iowa City, Iowa, Fire Department. The masks paid off the first time they were used.

Eight-year-old Ruth Ann Griffin of Iowa City, Iowa, will always remember the day Fire Chief Al Dolezal presented her a special citation from the state fire marshal for the rescue of her four brothers and sisters. Ruth Ann was overcome by smoke as she attempted to rescue a fifth person, her baby brother. Firemen equipped with demand masks then saved both her and the baby
—Photo courtesy Iowa City Press-Citizen

Firemen said that without the breathing apparatus it probably would have been impossible to rescue eight-year-old Ruth Ann Griffin and her nine-month-old brother, Vernon. The girl collapsed in her smoke-filled home while trying to save her baby brother. Plucky Ruth Ann had led four other Griffin children to safety after she discovered the blaze. She then dashed back into the two-story frame house, lifted the baby from his crib, and started outside. By this time, heavy smoke filled the room; Ruth collapsed.

Iowa City Fire Chief Al Dolezal, first on the scene, attempted a rescue. He managed to reach the empty crib, then

Continued on page 1100

"Best hose ever" Chief says of EUREKA Multiple-Woven with Dacron Filler Cords

That's the considered verdict of the Chief* of one of the first fire departments to acquire this lighter, stronger, more flexible hose. After nearly five years' use, he still enthuses, "I used to swear by Eureka's all-cotton multiple-woven, rubber-lined fire hose. Now, woven with Dacron filler cords, it's the *best hose ever!*"

It's not hard to understand his enthusiasm when you consider that a hose gains both its *strength* and *flexibility* from the filler (circular) cords. Also, the smaller, stronger Dacron filler yarn, which replaces about half the cotton yarn in the jacket, *weighs only one-third as much!* Imagine, then, all these advantages of Dacron filler yarn combined in a hose woven on Eureka's unique looms that interweave *all plies* into a single jacket that leaves no space to harbor water or dirt!

Your Eureka representative will gladly show you this "best ever" fire hose. Write or wire today. Remember, he is a fire hose specialist!

*Name on request

Note how criss-crossing vertical cords tie all plies into one solid body.

EUREKA

"For greater protection to life and property"

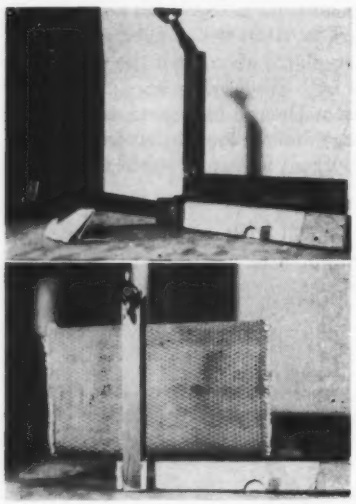
EUREKA FIRE HOSE

Since 1875, Specialists in Manufacturing Circular-Woven Rubber-Lined Fire Hose

1 Market Street • Passaic, New Jersey *Division of United States Rubber Company*

short cuts and gadgets

Vise Assures Square Edges for Recoupling



When the clamp of this hose vise is tightened by means of the wing nut, a smooth square edge can be cut on fire hose for recoupling. The makers of this tool, Captain Don Proto, Fireman La-Mont Kehoe and Volunteer Fireman John Halloran of the Hastings, Neb., Fire Department, claim that if the clamp is tight it will help prevent unraveling of the jacket.

A piece of angle iron approximately 10 inches long is squared and welded at a right angle with the clamp which is constructed of bar stock. The movable jaw is of bar stock bolted to the assembly. The gadget should be mounted at the edge of the work bench with screws countersunk into the angle iron to allow the hose to lie square.

Rogues Gallery

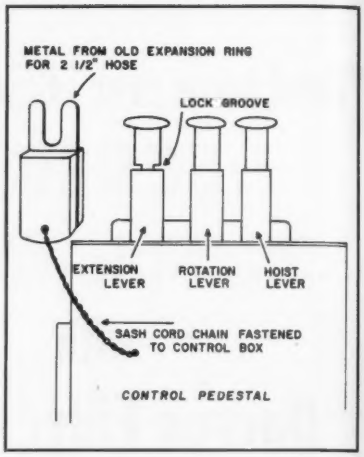
Fire Chief Wayne E. Swanson of Rockford, Ill., discovered that many fires were started by little boys who like to see the fire apparatus in action. At the same time he came up with a solution to the problem with the aid of photography. When a youthful fire bug is apprehended, the Chief puts his picture in a department file. Since the method was started a year ago there have been no repeaters among the offenders.

Color Indicates Border Hydrant

The Monroe, Wis., Volunteer Fire Department paints the caps of fire hydrants silver for better identification. At the suggestion of Fireman George Grant, the caps of the last hydrants near the city limits are painted yellow to indicate the end of the water system. This signals to responding firemen that they must lay hose from that point if a fire is beyond the hydrant.

Monroe Chief Joe Benkert says the idea is very good for a department that has only a small number of runs a year and has difficulty acquainting every member with the exact hydrant locations.

Editor's note: Others who might desire to adopt this idea might bear in mind the generally accepted policy of coloring hydrant tops according to flow, i.e.: Green for ample flow; yellow for fair and red for poor flow and dead ends. Under this system it might be advisable to use some other color than yellow, red or green to indicate the "last hydrant."



Aerial Ladder Safety Lock

A simple safety lock for aerial ladder extension controls was designed by Chief Charles D. Ellis, Ventnor City, N. J. The reasons for its use and application are best described in Chief Ellis' own words: "Last fall when we were anticipating buying a new ladder truck it was decided that we would look at some new ones within a radius of 75 miles. At one of the firehouses we visited I noticed a fireman with a surgical bandage on one hand. I asked him what had happened? He answered that while working off an aerial ladder the operator had extended the fly, without first notifying him, and that he had one finger cut off.

"Since we now have a new ladder truck with the same type of control (although no one is permitted on the ladder while it is being extended), this same thing could happen if the operator hit the wrong control lever, especially at night. I decided to do something to try to prevent such an occurrence by means of a safety lock.

"I finally came up with the idea of cutting a groove on each side of the depression rod of the control lever and using a horseshoe lock to prevent any accidental movement. This locking piece is fastened to the control box by means of a chain and the extension lever is locked at all times except when the ladder is deliberately extended."

Albany, Cal., Installs Directional Signals on All Apparatus

Heavy traffic conditions on U. S. Route 40 and Freeway 40 prompted the Albany, Cal., Fire Department to experiment with the use of standard Class A truck direction signals. The response from the motoring public was so good that Chief Fred Pimental ordered them installed on all apparatus. Firemen Don C. Day and Richard Courtney are shown in the photograph with the amber lights that are mounted on the front of the pumper. The rear indicators are red as in standard truck installations. The lights may be left on when stopped on a highway to afford additional warning to motorists.

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For complete information, contact your local 2-way radio service organization or write for literature.

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- **Transistor Power Amplifier (car models)**
- **15 Tubes (in AC High Band Models)**
- **Electronic Squelch Circuit**
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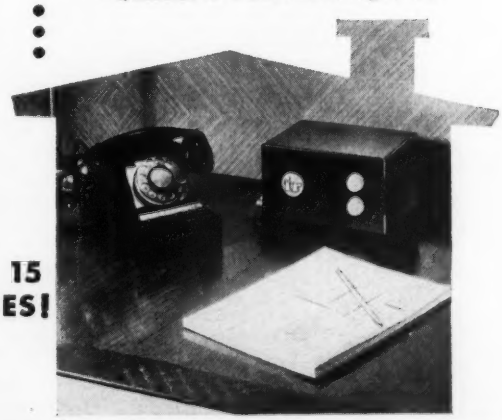

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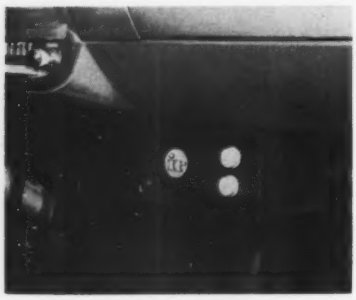
- personalities

New Receiver by Industrial Radio Corp.



A new radio receiver, the "Volunteer," FCDA approved and designed for monitoring police and fire department, utility, government and industrial radio frequencies, in the 25 to 55 mc and 140 to 175 mc bands, is announced by Industrial Radio Corp., 428 N. Parkside Ave., Chicago, Ill.

The small crystal-controlled set is designed for single channel use. The AC models employ 15 tubes, have built-in loud speakers and power supplies. Mobile models are available for 6 to 12-volt electrical systems. The new unit is only 4 inches x 6 inches x 8 inches, small enough to be mounted anywhere under a car dash without difficulty. For complete details write the above.

New Gamewell Booklet

The Gamewell Company has released a new 20-page publication entitled "Conversation or Organization" which provides information on the selection, application and engineering of modern fire alarm systems for cities and towns.

The basic information presented in layman's language, covers such factors as whether or not voice communication is necessary for fire alarms, the desirability of limiting fire fighting response and the insurance factors involved in the selection of a fire alarm system. Fourteen separate problem areas, covering everything from reliability of service to community acceptance, are treated in detail for an evaluation of fire alarm systems.

This publication is a part of a specially prepared Gamewell "Facts Kit" now available to municipal officials, fire chiefs and others from the Gamewell Company, Department BG, Newton Upper Falls 64, Mass.

Dual AM Radio Receiver—Conelrad Alert Monitor

Allen B. Du Mont Laboratories, Inc. has introduced low-cost AM radio receiver, which at a touch becomes an automatic warning device in case of an enemy air attack.

The CONELRAD Alert Monitor has the dual function of an ordinary broadcast receiver and automatic air-raid alert system; The receiver is applicable for all transmiter operations that will be required (FCC ruling) by January 2, 1957 for receiving CONELRAD alerts.

In normal position, the unit is tunable to any radio station within range in the AM broadcast band (540-KC to 1620-KC). In "CONELRAD" position, the receiver is inaudible but becomes activated when a CONELRAD alert has been initiated.

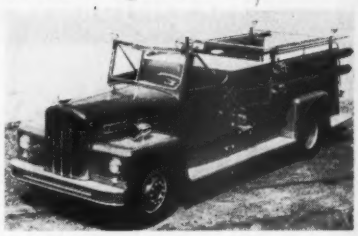
For complete information, contact the Mobile Communications Sales Department, Allen B. Du Mont Laboratories, Inc., 760 Bloomfield Avenue, Clifton, New Jersey.

Motorola Shifts West Coast Headquarters

Reflecting the growth of its two-way radio and industrial products business in Western States, Motorola recently announced the removal of its West Coast headquarters from San Mateo, Calif., to a new and larger building at Burlingame, Calif. The 10,000 sq. ft. facility should be completed by mid-November, according to Donald F. Brickley v.p. and Western Divisional s.m. of Motorola Communications and Electronics, Inc. It will house parts and service department, credit, accounting and record keeping for a ten-state area including Arizona, Colorado, Wyoming, Montana, Idaho, Nevada, Utah and the West Coast States.

Building plans include provisions for another 4,000 sq. ft. of space to meet future growth requirements. The structure is located at 1616 Rollins Road, Millside Industrial Park, Burlingame.

Ward La France Introduces New Fire Fighter for 1957



This handsome, functionally styled pumper has been introduced by the Ward LaFrance Truck Corporation, Elmira, N. Y. Featuring a powerful new 270 H.P. engine, it incorporates an electromatic pump with push-button controls, bus-type front axle and shorter wheelbase. In addition, it offers a shorter turning radius plus a larger, fully-waterproofed equipment compartment over the pump with large access doors on each side. Complete details of 1957 Ward LaFrance models may be obtained from the company's sales representatives, or by writing the firm direct.

Bendix Appoints Two Sales Engineers

Appointment of Tanney E. Oberg and Jack E. Peters as mobile sales engineers has been announced by A. E. Jones, mobile products sales manager, Bendix Radio Division of Bendix Aviation Corporation.

In their new positions, Messrs. Oberg and Peters will be responsible for sales and customer relations in connection with Bendix two-way radio communication systems in New York State, and Ohio and western Pennsylvania respectively.

Mr. Oberg has been associated with Bendix since 1952 and was prior to his new assignment, a senior field engineer working on radar equipment in connec-

Continued on Page 1089

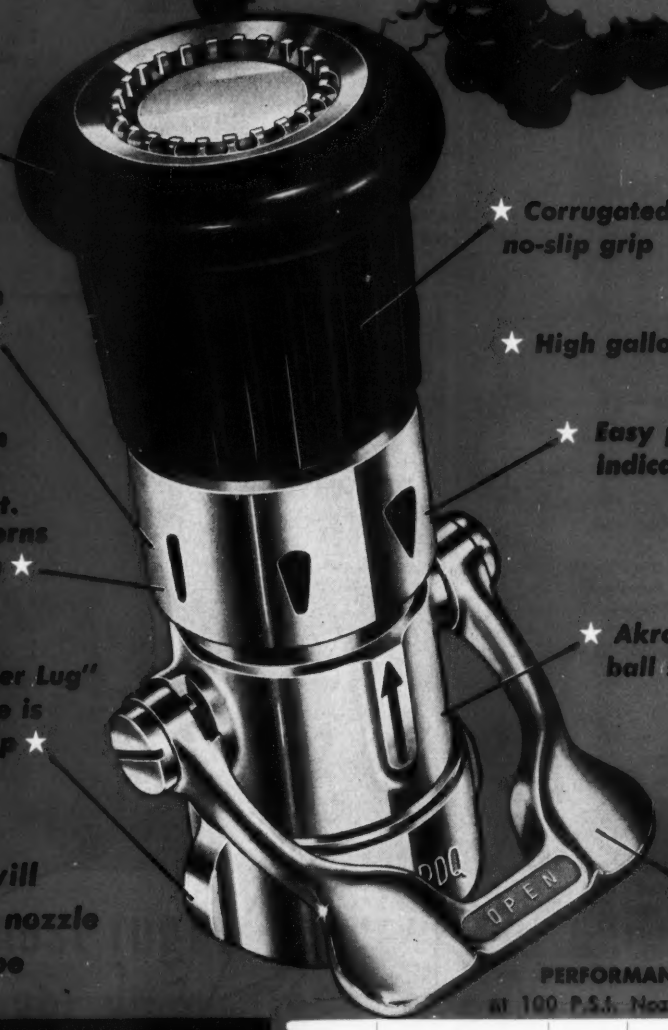
YOU EXPECT THE BEST FROM AKRON BRASS

– here it is . . .

Entirely New

PDQ®

FOG NOZZLE



★ Resilient rubber bumper for protection against damage

★ Adjustable through all angles of fog

★ Positive stream positioning — by feel or sight. Clicks into fog patterns or straight stream

★ Swivelling "Rocker Lug" base — handle is always on top

★ You too will agree — finest nozzle of its type

★ Corrugated no-slip grip

★ High gallonage

★ Easy pattern indicators

★ Akron quality ball shut-off

★ Man-size handle

PERFORMANCE DATA
at 100 P.S.I. Nozzle Pressure

STYLE	SIZE	GPM	PRICE PB	PRICE CP
1209	¾"-1"	24	$67.50	$72.00
1218	1½"	95	72.00	76.50
1219	1½"	125	72.00	76.50
1229	2½" for PP	250	78.50	84.00
1239	2½" Dir. Con.	250	92.00	97.50
1249	2½" with PP	250	102.00	115.50

AKRON BRASS

FIRE FIGHTING EQUIPMENT

Akron Brass Mfg. Company, Inc. • Wooster, Ohio

FALSE ALARMS

Under Wraps

A lieutenant of a fireboat fell overboard. He was rescued by a solitary fireman. The officer asked his preserver how he could reward him.

"About the best thing you can do for me, sir," said the marine fire fighter, earnestly, "is to say nothing about it. If the other fellows knew I had pulled you out they would chuck me in."

W N Y F

"Has your wife changed much since you married her?"

"Changed! I'll say she has! She's changed my hours, my habits and my friends!"

He worked his way through college,
As heroes often do.
Now he's right back where he started,
Working his son's way through.

"I hear you advertised for a wife—any replies?
"Oh yes—hundreds of 'em."
"What did they say?"
"Most of 'em said: 'You can have mine!' "

Twice-Told Tale—But Good

A drunk staggered into a bar, propped himself against the bar and addressed the bartender.

"Shay, can you tell me who runs Alcoholics Anonymoussh," he asked.

"Why, do you want to join?" asked the bartender.

"Nope," said the drunk, "I wanna resign."

"Would you like to see a model home?" asked the realtor.

"Sure would," said the fire fighter "what time does she get off?"

A woman went to the doctor to complain about her husband's delusion. "It's terrible, Doctor," she said. "All the time he thinks he's a refrigerator."

"Well," consoled the medical man, "that isn't too bad. Quite a harmless delusion, I'd say."

"The delusion I don't mind, Doctor. But when he sleeps with his mouth open, the little light keeps me awake!"

The honeymoon is over when the dog brings your slippers and your wife barks at you!.

Bum No. 1: "I hate holidays."
Bum No. 2: "Yeah . . . it makes me feel so common when nobody ain't working."

Some fellers can drink beer just as well sittin' down as they can standin' up. But most of 'em can't stand up so well after they've been drinkin' sittin' down as they can sit after drinkin' standin' up.

Indirect Application!

Doctor: "Your husband must have absolute quiet. Here is a sleeping powder."

Wife: "When do I give to to him?"

Doctor: "You don't give it to him—you take it yourself."

Daffynitions

A night club is a place where they have what it takes to take what you have.

Sandy MacTavish has found out what to do with old razor blades. He shaves with them.

Kinkchaser Sez: Then there was the mayor who insisted that two-wheel brakes for pumpers were sufficient. He figured if the hind end of the rig stopped, the front end couldn't get very far.

Expectant Fire Fighter's First

The expectant fireman father had feverishly paced the maternity ward corridor. When at last the nurse brought him the exciting news that his first-born was a bouncing girl he flopped into a chair, mopped his wrinkled brow and exclaimed:

"Thank God it's a girl. I'd never want a son of mine to go through what I have today!"

You can lead a fireman to water—but why disappoint him like that?

Too many young firemen spend their time off tinkering with misses in their motors.

A sign of middle age is when the girl you whistle at thinks you must be calling a dog.

"Catch you later!"

Neatest, most rugged lightweight uniform you'll ever wear: DACRON and wool

REG. U. S. PAT. OFF.

His tropical-weight uniform passes inspection every time for neat appearance, scratch-free comfort . . . it's made of "Dacron"* and wool. Even in wet or humid weather, "Dacron" polyester fiber helps it shrug off wrinkles, hold its press. This comfortable tropical-weight uniform offers rugged resistance to wear at critical cuff, pocket, elbow and knee points, cutting replacement costs. Fewer pressings, easy spot removal mean a new low in upkeep, too. Ask your supplier for tropical-weight uniforms of "Dacron" and wool! E. I. du Pont de Nemours & Co. (Inc.), Textile Fibers Dept., Wilmington 98, Delaware.

DACRON
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Firemen the world over rely on Braxmar for the finest badges money can buy. We offer the widest possible selection in nickel, chrome plate, sterling silver, gold plate, rolled gold and solid gold; all of our badges and insignia are the work of experts with a lifetime of service.

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THE C. G. BRAXMAR CO., INC.

216 East 45th Street

New York 17, New York

THE WATCH DESK

overhauling the firemanic news of the day

Prof Burns Up the Road!

Down Dallas way, some motorists honked, others yelled, waved and pointed. Nearly everyone pulled off the road when they met Prof. E. S. Lunsford, an agriculture teacher from Roswell, Ga.

Prof. Lunsford, driving through afternoon traffic and pulling a trailer, couldn't figure why he was attracting so much attention.

It wasn't until a deputy sheriff caught up with him after a three-mile chase that he learned the reason.

Flames were bursting out all over from his trailer. The heat had melted the tail light of the Prof's auto and destroyed the contents of the trailer, including four spare tires, six bags of clothing and two mattresses.

"Goodness to gracious" was all that the surprised Prof' could say.

Lightning Can't Scare This Lad

On June 15, 1956 in Ogdensburg, N. Y., lightning struck the home of Mr. and Mrs. Edward Ashton causing a fire that burned their five year old son, Stanley, on the nose, face and forehead and singed his eyebrows and hair. The boy, who was alone at the time because the storm kept his mother at the house of a next-door neighbor, displayed a coolness not expected of a five-year-old lad. Even though painfully burned he calmly reported the fire by telephone.

Firemen brought the blaze under control in 40 minutes although the two story residence was badly damaged. An outboard motor in a shed at the rear of the house was melted.

Francis L. Brown

Mortified Morpheus

One member of the Silverton, Ohio, Volunteer Fire Department has resolved not to sleep during television plays.

While blissfully "resting his eyes" during a video "mellow" drama a fire alarm sounded. He leaped from the couch, grabbed his turnouts and before anyone in the house could stop him, sped off in his car.

Several blocks down the road he returned to earth, having realized the "alarm" he was responding to was part of the TV performance. Returning home correctly, our hero hung up his gear and sheepishly told his wife he guessed he'd better go to bed.

Water Well "Burns" in Texas

Believe it or not! Richardson, Tex., firemen were called out recently to extinguish a fire in a water well. Cause of the blaze was attributed to a broken butane fuel line which leaked the highly volatile fuel into the well shaft, where the fumes were ignited by a spark from the water pump. Damage was limited to paint burned off the side of the house near where the well was located.

Strictly for the Birds

This one is for the birds!

A cigarette carried by either a sparrow or a robin was blamed for a blaze which swept the roof of a three-story dwelling in Bridgeport, Conn., which saw the rescue of an elderly, semi-invalided widow, and an injury to one fire fighter. Mrs. Anna T. Wakeley was led to safety down a smoke-choked rear stairway. Fire fighter Charles Doebeli, of Ladder Company 3, was treated at a hospital for an injury to his left foot.

Assistant Chief Jerome C. Barrett said investigation showed the fire, which swept the roof of the building at 1075 Maplewood avenue, started near a bird's nest which had been built on the roof of the house.

Tom Magner

Hot Off the Tape

Baltimore, Md., police charged 43-year-old Mrs. Mary E. Love (what's in a name) with arson August 5 after she told them she had set her apartment afire so her husband "wouldn't have a house to come home to" after a spat. The Brothers, called to her address, put out a blaze in a mattress. . . . It was so hot in Little Rock, Ark., on August 5 last (104 degrees F.) it set off a fire alarm in the home of Archie Williams while his family was away. . . . In Kennett Square, Pa., Harold Lux, 36, a truck driver, who drove in stock car races in his spare time, burned to death October 2 when his tractor-trailer overturned and caught fire on the Baltimore Pike. . . . The mystery of three October fires which caused $8,000 damage in Greensboro, N. C., was cleared up when a 14-year-old youth told police he set them because *"I like to watch fires, and see firemen work."* . . . Along the same line, two brothers, 7 and 11 years old, on September 26 told police how they caused $83,000 damage on hooky-playing vandal sprees at two Pittsburgh district churches. They ransacked and set fire to a Methodist Church causing damage of $75,000 and vandalized a chapel causing $8,000 loss. Asked how come, they shrugged their shoulders and said they "didn't know." . . . Two among the 4,288 candidates who passed the recent New York firemen's written exam' attained a 100% physical score. . . . Francis Fuller, 26, narrowly escaped death October 2 when he crawled to safety seconds before gasoline ignited his truck and turned the load of poultry

Nuclear energy takes over the fire watch...

PYR-A-LARM Today's fire departments are made up of highly-trained men with powerful, modern equipment at their disposal . . . but they must be warned of fire in time to put that equipment to most effective use! Nuclear-powered PYR-A-LARM gives them those vital, extra minutes because *it reacts to the products of combustion* . . . flashes the alarm before dangerous temperatures build up . . . before smoke or flames develop . . . long before a thermally-sensitive device would respond!

At this moment, PYR-A-LARM is on guard in more than one hundred of the largest firms in the country. To discover how easily and economically this product of modern science can take over the fire watch for you . . . and what it can mean in terms of reduced fire loss and lower insurance premiums . . . just fill out the coupon. We shall gladly arrange a demonstration in your office, or send full information. *Approved by Underwriters' Laboratories, Inc. and Factory Mutual Laboratories.*

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NAME OF PLANT.....

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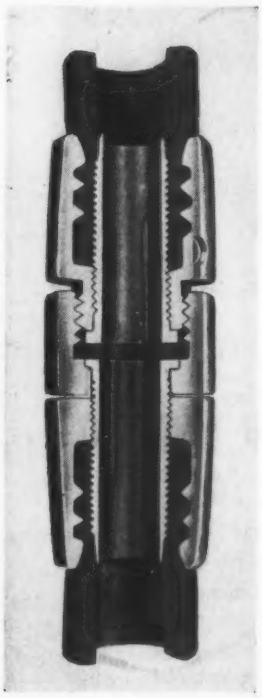
CITY.....STATE.....

and ham products into a flaming mass. His 5-ton vehicle hit a railroad overpass on the Veterans' Highway, near Hartford, Conn. . . . In Fort Smith, Ark., Louis Kelley Morris was trapped in his burning house and perished, while searching for his wife, who had already been rescued. . . . In Providence, R. I., John L. Allen, an educator, died in his flaming house in a vain effort to save his daughter who had already jumped to safety with her mother out of a window onto a porch roof. . . . Barrels of acid in a 20-ton tractor-trailer let go like a string of giant firecrackers August 9 last, when the truck overturned and burned near Alphano, N. J. The explosions were heard 15 miles away. The driver escaped injury when he leaped clear of the truck. Two auto drivers, following closely behind, also jumped clear. Parts of the truck were blown 700 feet from the blazing vehicle. . . . Orchids to 16-year-old Patricia Brozuski of White Meadow Lake, N. J. She was baby-sitting in a third-floor Rockaway apartment when she discovered fire. She grabbed up her 1-year-old charge and dashed through smoke and flames, to turn in an alarm. Fire did $40,000 damage to Rockaway business district. . . . Department of Red Faces! Greensboro, N. C. fire fighters were called out on September 16 to discover a fire had done several thousand dollars worth of damage—to the Greensboro Firemen's Club. On top o' that, the fire had been extinguished when they arrived.

SPECIFY **BAR-WAY,**



THE ACCEPTED STANDARD FOR HIGH PRESSURE HOSE COUPLINGS . . .

1. **RELIABLE**—Bar-Way builds to quality standards. We make the best possible.
2. **NO-CHOKE**—Coupling resistance to flow within plus or minus 2% of equivalent hose length.
3. **HIGH-SLIP**—Non-snagging design so that all models slip over ground obstructions.
4. **STANDARDIZED**—Interchangeable parts, 100% inspected; made on automatic equipment.
5. **STOCKED**—Shipments made from stock on all standard types from Stamford.

WHAT'S NEW

If weight is important to you, a saving of 50% can be had in standard Bar-Way ¾" and 1" models. Bronze shells are replaced with aluminum—other parts standard—and all parts are chrome plated and polished as a means of protecting all threads in each metal. Prices are standard for chrome plated couplings.

BAR-WAY BAR-WAY MFG. CO., STAMFORD, CONN.

Big Mouth!

William Chaffee, aged 18, was haled into Highland Park, Ill., police magistrate's court recently on motorists' complaints.

They said they hustled to curb their autos the night of March 16th when they heard the banshee wail of a siren coming from Chaffee's car.

"I was just making the noise with my mouth. . . . I wasn't trying to scare anybody," explained William in reply to the charge of unauthorized use of a siren.

Magistrate Samuel S. Smith stared in disbelief when Chaffee admitted making the noise but pleaded "not guilty, because I have no siren." He asked Chaffee for an explanation.

Chaffee said he made the noise with his mouth and was showing a friend how he did it earlier at a basketball game. He said he hadn't noticed the car windows were open.

Magistrate Smith, still skeptical, asked for a demonstration. Whereupon Chaffee cupped his hands to his face and let go. Courtroom spectators first were stunned. Later they broke into laughter. They agreed it sounded like a piece of fire apparatus in the room. Even the magistrate got a jolt.

We understand William was taken off the hook, with a warning.

Raymond Huffman

Hot Hose Burns Babe

What happens to a plastic garden hose left in a hot Florida sun all day?

The answer is perhaps nothing to the hose—but it's different with the contents of the hose.

A 9-year-old girl learned the answer to this question when she received first degree burns when water from a garden hose was sprayed on her by her little brother.

"It just scalded her," said the girl's mother. But the accident led safety officials at Macdill Air Force Base to issue warnings that hoses, particularly plastic types, should be disconnected and drained when not in use.

Recently we've been reading about scientific experiments with solar heating and cooking, down in Florida. But this is the first we've heard about the sun boiling water in garden hose. Fire fighters—be sure to pick up those lengths and get'em out 'n the sun!

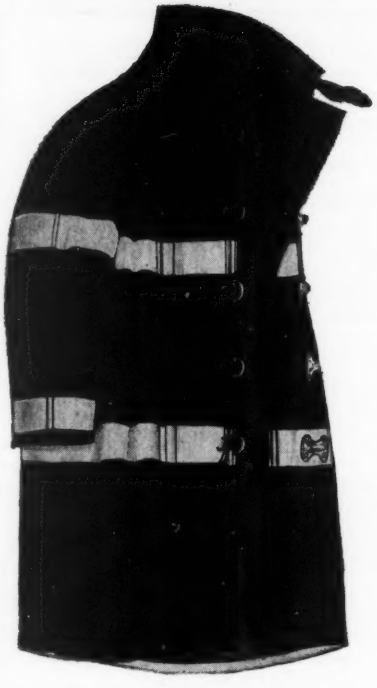
Fire Takes Cab To Fire Station

Gloucester, Mass., firemen were startled recently when they received a phone call that a fire would be delivered to the fire station. Sure enough, when they looked outside, it had arrived! By Taxi!

When the front seat cushion of a West End Taxi Co. vehicle caught fire, the driver radioed the dispatcher to call the firemen that he was on his way to the station. Firemen doused the flames and listed the cause as careless smoking.

MIDWESTERN

Safety Clothing for FIREMEN



The Original
STRIPED SAFETY COAT

- ☆ ***New Yellow Rubber Stripes!***
- ☆ ***Maximum Visibility!***
- ☆ ***Maximum Durability!***
- ☆ ***Exclusive Safety Features!***

YOU deserve the BEST PROTECTION OBTAINABLE for your hazardous work of protecting life, and property against fire. The Mackinaw Safety Coat with new yellow stripes is the answer! Highly visible stripes are rubberized as part of the material . . . not painted, glued or sewed on. Tests indicate that the new yellow, like black, retains its natural color and has the same durability.

There are many imitations but no substitute for the superior quality, design, fabric texture and safety features you get by specifying MIDWESTERN!

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COMBINATION SAFETY SUIT

The Midwestern Rubberized Coat and Bunker Pants make it easy for firemen to keep both warm and dry even in the most severe weather. Close fitting collar and elastic inner sleeve keep out sparks and water. Detachable wool lining. Pants have double-stitched seams, reinforcing rivets at points of strain, large roomy pocket space.

For complete information on our full line of safety clothing for firemen, see your Midwestern dealer. A letter to the factory will also bring you literature and materials for your inspection.

NONE GENUINE WITHOUT THIS TRADE MARK

MIDWESTERN SAFETY MFG. CO. Mackinaw, Illinois

Manufacturers of the Famous **MACKINAW Safety Coats**

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in weak signal areas
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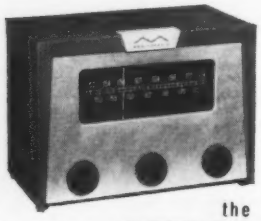
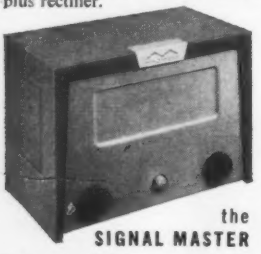
Now you can expand your communications system with the first really high quality FM receivers ever offered at popular prices. These ultra-sensitive new MONITORADIOS pull in weak signals loud and clear—built for round-the-clock duty to keep all stations constantly alerted . . . fully informed . . . effectively coordinated. Indispensable for police, fire, civil defense and similar emergency units.



the
MINUTE MAN

MR-33, MR-10—Tunable FM receivers for powerful, static-free monitoring of all stations on either the 30-50 or 152-174 mc band. 3 μv sensitivity. 7 tubes plus rectifier.



the
SIGNAL MASTER

MRC-33, MRC-10—For the first time, a low cost crystal-controlled receiver of quality design. Pre-set to any frequency in the 25-54 or 147-174 mc bands. 2.5 μv sensitivity. 8 tubes plus rectifier. Crystal included.

Both units feature powerful 5" speaker, fully tuned RF stage, built-in squelch. Housed in rugged metal cabinets. 110-120V, 60 cycle, AC only. U.L. approved. The Minute Man—$64.50. The Signal Master—$76.50.

Write today for information describing all MONITORADIOS—the world's most complete line of emergency receiving equipment.

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DIVISION of I. D. E. A., Inc.
7900 Pendleton Pike,
Indianapolis 26, Indiana

the round table

discussion of current fire department and fire management problems

Curbing the Inquisitive Spectator at Fires and Other Emergencies

THIS IS A CONTINUATION of the Round Table on curbing the inquisitive spectator at fires and other emergencies.

The generous response from our readers made it necessary to carry the discussion over to this issue. The editors will welcome any additional comments on the subject, or on next month's subject which is described in a box on a subsequent page. Address replies to Round Table Editor, FIRE ENGINEERING, 305 East 45th Street, New York 17, N. Y.

Discussion of the Subject

Leonard H. Bailke, Chief, Muskegon, Mich.: I feel that the crowds of inquisitive spectators at fires and emergencies have increased considerably, due to radio and television. The public hears about the fire while at home, and immediately goes to see it. The main trouble we have with large crowds is keeping them a safe distance away from the fire. However, we have wonderful cooperation from our police department, and they do a good job of holding the crowds back.

In the event of a large fire, the police immediately rope off the area and keep the public behind these ropes. The police dispatch a cruiser to every alarm of fire we receive, and they reroute traffic away from the scene. After a building can be entered, police officers are stationed at each entrance and do not allow anyone to enter who does not have immediate business there. After the fire, the building is turned over to the owner or occupant, or a police officer is maintained at the scene to prevent anyone from entering.

We have not taken any action to have the radio or TV stations discourage the crowds. We feel that it is their business to obtain news and it wouldn't do us any good to try to prevent them from broadcasting it.

I feel it would be almost impossible to keep a crowd of spectators away from the scene of a fire, but that the best assistance you can obtain is through cooperation from the police department in your city.

A. F. Broussard, Chief, Lafayette, La.: The crowds of inquisitive spectators at fires or other emergencies are on the increase, especially at the times of the day when people are free from work. At other times, there is not much of a crowd. These crowds interfere with our getting the later-called companies into operation. As you know, everyone has to come by car or some sort of vehicle. They jam the area around the fire.

Public broadcasting or televising does increase the size of spectator crowds at fires.

We have asked the public not to go to the scene of a fire, but they do anyway, afraid that they will miss something.

We believe a good police patrol and a delayed broadcast until after the fire has been controlled will help to curb the crowds of sight-seers.

B. P. Lemieux, Chief, Calgary, Alta.: The number of spectators at a fire has increased here in Calgary in the last few years. The population growth of the city has been very rapid, and has more than doubled in this period. It does not however, affect the operation of this department as we have wonderful cooperation from the police department in regard to traffic control.

I believe that broadcasting and televising has increased the crowds. The effect of the increasing number of cars which go to a fire is worse than the actual number of spectators at the fire.

We have asked the radio stations to delay broadcasts until fire apparatus and additional help have had a chance to get in and be located.

On major fires, the police remove all spectators and cars from the block in which the fire is located.

J. P. Newark, Chief, Grand Forks, N. D.: We do have a noticeable increase in spectators at the larger fires. This is

THIS MONTH'S QUESTIONS

Do you find the crowds of inquisitive spectators at fires or other emergencies on the increase? If so, how seriously does this interfere with your fire department operations?

Do you find the public broadcasting and/or televising of fires or other emergencies increase the size of spectator crowds?

Have you taken any action to enlist the aid of radio and/or TV stations to discourage crowd congregation and interference?

What steps would you recommend to curb these crowds of curious sightseers?

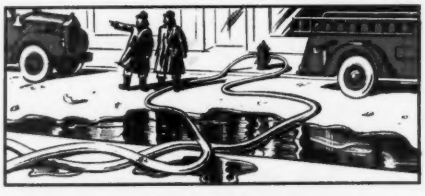
NOW! 1½ INCH DOUBLE JACKET MUNICIPAL FIRE HOSE in 100-FOOT LENGTHS!

It's new "Quaker 100"—a 600 lb. hose. And it's quick drying, easy to pack and fold

● "Quaker 100" is made from extra-long staple cotton, chemically treated to keep its flexibility and reduce elongation. It is exceptionally light and strong.

LIGHT WEIGHT. One coupled length of "Quaker 100" weighs only 34½ lbs., as opposed to a weight of 51 lbs. for two coupled 50-foot lengths of our popular Delaware brand.

EXTRA STRONG. The specially treated cotton, which supports the "Dacron" filler cords, provides at least 10% more strength in each warp strand woven into the jacket. (Average burst pressure per three foot length is 1200 lbs.)



QUICK DRYING. "Quaker 100" actually absorbs 25% less water than the conventional 600 lb. dacron filler hose. "Quaker 100" packs and folds in less time and space.

GOES INTO ACTION QUICKLY. 100 feet long, "Quaker 100" reduces by 50% the danger of couplings pulling off or becoming snagged. The hose "corners" easily.

"SMOOTH-AS-GLASS" WATERWAY. The close picks per inch of the weave reduce friction loss to a minimum (as do 50% fewer couplings).

One look at new "Quaker 100" Double Jacket municipal fire hose is all you'll need to see the savings . . . to see how easy it is to use and maintain. Why not take that look soon?

If you'd like the name of the Quaker or Quaker Pioneer Distributor nearest you, just write. He can save you time, trouble and money. Write, too, for free brochure on "Quaker 100".

Quaker HKP

H. K. PORTER COMPANY, INC.
QUAKER RUBBER DIVISION
PHILADELPHIA 24, PA.
QUAKER PIONEER RUBBER DIVISION
PITTSBURG, CALIF.

not due to people becoming more inquisitive, but rather to the increased population of the city. We find this situation interferes to quite an extent at times, as our police and fire departments are undermanned and the crowds interfere with the movement of apparatus and equipment. Even during an emergency we must give consideration to public safety and thereby have to sacrifice precious moments rather than injure someone.

We find that broadcasting or televising fires has a tendency to bring larger crowds to a fire as their curiosity has been aroused by the thought that it must be a sensational fire or it would not have been put over the air.

We have not tried to discourage crowd congregation by radio, but it would seem that we would get the reverse effect from this method.

The best solution seems to be gained by securing enough police officers to keep the crowds back far enough so that they cannot see what is happening. They will soon get tired of standing around and lose interest in the proceedings.

S. D. O'Conor, Chief, Beaumont, Tex.: We note that the crowds are on the increase during vacation periods, especially school vacations. When apparatus is on its way to a fire with siren on, cars take in after it and quite often block the streets where the fire is. Additional apparatus, if needed, has a hard time getting to the scene. We usually dispatch enough apparatus on the first alarm to take care of the situation for that reason. Since all our trucks are radio-equipped, we can always send them back if they are not needed. Interference in operations is growing.

We believe the public broadcasting and televising of fires have something to do with the increase of crowds.

All broadcasting and television stations are cooperative in every respect. But when they announce a large fire or emergency and ask people to stay away, it is just another incentive for them to go.

We just haven't found any cure for the curious sight-seer.

Francis J. Dagon, Chief, East Hartford, Conn.: We do have some inquisitive spectators at fires, but do not have too much trouble with them. Our police department is notified of all fires large and small and by means of their two-way radio, they get on the job pretty fast and are very effective. I think a good strong fire line would help a lot, and if the traffic would pull over to the curb and stay there on hearing the sirens, the fire equipment could get there before the spectators and that would give the police a chance to keep them away and to form a strong fire line.

Harry W. Marr, Chief, Portland, Maine: I have not noticed any increase of inquisitive spectators at major fires in Portland.

We do not have on-the-spot broadcasts or the televising of fires which would tend to increase the size of spectator crowds. The policy of the local TV stations is to record the fires while they are in progress and to show them later in their regularly scheduled news programs.

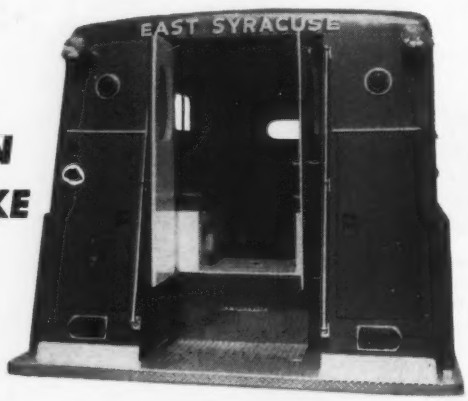
If the crowd at major fires should increase so as to interfere with fire department operations, I would recommend that the facilities of both radio and TV mediums be enlisted to request the public to stay away from the fire area.

I would also recommend that the police and fire departments devise some plan that would be sure to keep the area free for fire fighting, although I might add, that here in Portland the police cooperate wonderfully. During a major fire, the fire area is completely roped off with policemen on duty, and the results have been very gratifying.

Clyde Wray, Chief, Royal Oak, Mich.: Our population has been increasing very rapidly in the past five years, which undoubtedly is the reason why our spectators have increased. They do not hamper the fire department very much as a police officer is always dispatched to our alarms. If the crowd or traffic is heavy, additional officers are sent. All our equipment has three-way radio and of course, the police are radio-equipped.

I do believe the broadcasting of fires by our local radio station has increased crowds. We have not, however, discussed this problem with the station.

As the problem of the sight-seers belongs to the police, they handle it by



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HANNAY FIRE HOSE REELS . . . HANNAY FIRE HOSE REELS . . .

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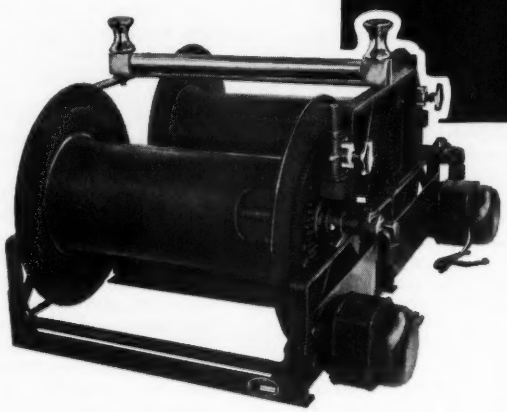

Built *by* firemen *for* firemen, Hannay Hose Reels have served so faithfully for over twenty years that they are accepted as the standard of quality by thousands of firefighters.

Your men and your equipment deserve the finest. Make sure they *get* it. *Specify* Hannay Fire Hose Reels.

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Write for free 16-page catalog of complete line.

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MEMCO AERIAL LADDER

For those of you who do not plan to attend the I.A.F.C. Convention (Miami, Fla. Nov. 12-15, 1956), we give you a preview of what the visiting Chiefs will see at the MEMCO EXHIBIT.

The Convention will mark the first public showing of the new 65 foot, three section MEMCO AERIAL unit – stronger – faster – smoother operating – a fine piece of apparatus for *any* Fire Department *anywhere.*

MEMCO AERIALS ARE NOT HIGH PRICED—YOUR DEPARTMENT *can* AFFORD ONE. It can be mounted on a truck already in service—or a new commercial chassis —or, your fire truck manufacturer can incorporate it into a new fire truck for you.

for details—write or telephone

MEMCO AERIAL LADDER CO.

1007 N. W. 36th Street
Oklahoma City 18, Oklahoma
Telephone—JAckson 5-6828

roping off the fire scene and detouring traffic.

C. M. Deal, Chief, Lakeland, Fla.: We do not have any trouble with spectators at fires. Evidently the people are too busy to spend time flocking to fires. We probably have a little more traffic, but few park.

If we have a spectacular fire, the radio station broadcasts from outside the combat area.

The only recommendations I would suggest would be to keep the spectators advised of the progress of the fire and to ask for police cooperation in informing and handling the crowds.

J. J. Sibert, Assistant Chief, Great Falls, Mont.: In some cases, the problem of spectators at fires has been quite serious. The broadcasting of fires has definitely increased the size of the crowd.

We haven't taken any action to enlist the aid of the broadcasting stations, for it seems the less they say about the fire, the smaller the crowd.

I would recommend more police coverage and a more rigid city ordinance pertaining to crowds gathering around or interfering with fire fighting.

B. L. Warlick, Chief, Jackson, Tenn.: We have found the crowds of inquisitive spectators at fires on the increase. The fire department has just that much more to worry about and to slow down operation. I believe the broadcasting or televising of fires has increased the size of the crowd.

I would recommend that streets be roped off at least 100 feet from the fire and that the police keep them clear.

The following replies are in answer to a previous discussion on calling back off-duty firemen.

John R. Weber, Chief, La Grange, Ill.: The LaGrange, Ill., Fire Department has both paid and part-paid men.

We do call back off-duty firemen in the event of large fires. In fact, our paid or full-time firemen have the same status as our part-paid or paid-on-call firemen when responding to fires on their days off (as far as response and payment for this service is concerned). Firemen on their days off duty respond to all fires to which part-paid or paid-on-call men respond to.

Our methods have been very successful and we have had response of approximately 70 per cent of our men over a period of time. It is my belief that we would receive 100 per cent response if we could reach all the men who are off duty. This is impossible, of course, because of the fact that some may be out of the city when fires occur. We place no restrictions on our off-duty firemen as far as leaving town is concerned.

I believe that we are running the ultimate in response that is possible without placing restrictions on leaving town. This, of course, we do not wish to do.

Our very favorable response is due, I believe, to the fact that (1) we pay our off-duty firemen for responding; (2) we have tried to make the work of the department as interesting as possible and to create a desire on the part of a fireman to be with his company when it is in action; (3) after every fire and after every training session at which both regular firemen and paid-on-call firemen attend, refreshments are served and the city pays the cost.

We pay our off-duty firemen and paid-on-call firemen $3.00 for each fire call responded to and for each training session attended. If fires are of more than 1-hour duration, we pay them $1.50 for each hour devoted to duty. Off-duty officers and officers of our paid-on-call section of the department receive $4.00 for each fire call responded to and $2.00 per hour for each additional hour after the first hour on fire duty.

We do maintain reserve apparatus to be manned by off-duty firemen and paid-on-call firemen who respond.

Leonard H. Balike, Chief, Muskegon, Mich.: Off-duty men are called by telephone. The alarm dispatcher has a list of general-alarm and third-alarm callers, who are the wives of eight of our firemen. Each one of these women has a roster of the names and telephone numbers of all firemen, the city manager and several other city officials. This roster is divided into four parts for each shift. The alarm dispatcher calls four of these women and tells them which group to call. Each woman, in turn, calls the men listed in her group. This list is kept up to date on all changes of phone numbers.

We incorporated this system in June 1954, and since then have had 85 to 90 per cent of our men available within a period of 12 to 15 minutes. Previous systems took about an hour to notify each off-duty man.

Our men receive no additional compensation for such emergency work. It is part of the job of being a fireman and they are subject to call 24 hours a day.

We have two reserve pumpers which

NEXT MONTH'S QUESTIONS

Some fire insurance inspection bureaus are being pressed to relax their requirements in relation to minimum hydrant spacing in residential areas. At present it is considered in some areas that a 500-foot limit from hydrant to property is an adequate standard resulting in a nominal spacing of about 1,000 feet hydrant to hydrant. Some organizations of town officials believe that this is too short a distance and that spacing up to 2,000 feet should be allowed.

Do you believe the nominal 1,000-foot spacing is adequate for residential fire fighting?

Would you be in favor of allowing spacing up to 2,000 feet?

If the greater spacing resulted in some streets being without a hydrant, would you approve?

Natecs gives SAFE clearance of intersections . . .

even protects against collisions of two emergency vehicles

In the NATECS system, a receiver mounted on the traffic signal at the intersection picks up a beam from a transmitter mounted on the approaching vehicle. Traffic lights automatically set on the emergency pattern. Then a *white* light turns on, *assuring* the emergency-vehicle driver that the intersection is clear.

If *two* signals are received at an intersection from emergency vehicles approaching from different directions, the white light facing the *second* vehicle flashes on and off, warning that another vehicle has priority.

Operation on radar frequencies permits a *narrow* beam that won't affect any signals but those directly ahead (up to ¼ mile) of the emergency vehicle. Completely automatic. No need to flip a switch as the vehicle changes direction. And after the vehicle passes the intersection, traffic lights automatically revert to normal sequence.

EAGLE

EAGLE SIGNAL CORPORATION
Municipal Division
Moline, Illinois

Eagle equipment saves lives . . . saves time

MAIL COUPON TODAY

EAGLE SIGNAL CORPORATION
Municipal Division, Dept. FE-1156
MOLINE, ILLINOIS

Please send complete information on Eagle's new emergency traffic control system.

NAME AND TITLE _____

MUNICIPALITY _____

FULL ADDRESS _____

Eastman

PLAYPIPE

THESE PLAYPIPES ARE MANUFACTURED OF THE VERY FINEST BRONZE, IN EITHER POLISHED BRASS OR CHROME PLATED FINISH.

MODEL 55

The EASTMAN Stream Straightener to give you solid streams at high pressure.

IMPORTANT FEATURES

1. Rubber bumper to protect tips from possible damage.
2. Tips — ¾" to 1⅛" designed and finished to give maximum efficiency under high pressures. One tip furnished with playpipe.
3. The EASTMAN SHUT-OFF — full 1½" waterways — honed to high finish to insure full flow of water.
4. Roller bearing swivels give complete freedom of action in handling.
5. Heavy rubber handles with steel core for maximum strength and wear.

Write for full information

SAMUEL EASTMAN CO., INC.

CONCORD, NEW HAMPSHIRE

are manned by the off-duty men upon arrival to their stations. When the required number of men are assigned to these reserve pumpers, the remaining men reporting in go directly to the scene of the fire.

R. J. Van Fleet, Chief, Hastings, Neb.: Off-duty firemen are summoned to duty by telephone at the present time. In the future we plan to use radio for this purpose.

Since September 1, all off-duty firemen responding to calls receive $2.00 per hour or fraction thereof. We have felt for many years that these men should be paid for this service.

John A. Laughlin, Chief, East Providence, R. I.: We recall off-duty firemen by outside, audible alarms and by telephone, and by paging, if they are in places of public assembly.

We have been very successful, getting 100 per cent response.

Our men receive no additional compensation for this work.

We maintain reserve apparatus.

John J. Nelligan, Chief, Bangor, Me.: Off-duty men are recalled by the use of tappers in their homes. This method has proved very successful, for we get about a 95 per cent response.

Off-duty men receive a day's pay for each shift worked.

We maintain reserve apparatus.

H. J. Richardson, Chief, Gainesville, Fla.: Off-duty firemen are recalled by telephone. We get a response of approximately 40 per cent.

Off-duty men receive no additional compensation for such emergency service.

Reserve apparatus is maintained by this department.

George Daniels, Chief, Roswell, N. M.: We recall off-duty men by telephone. About 50 per cent of them respond.

I feel we could get better response by setting up some kind of pay scale for call-back to help pay the expense of operating their automobiles, or by giving time off for the time they spend on call-back.

We do maintain reserve apparatus.

Karl Evans, Chief, Reno, Nev.: Off-duty men are recalled by phone and fire alarm bell. The response has been very good.

Off-duty men receive time off for this emergency service at the rate of 10 merits per hour. One hundred merits is equivalent to a day off.

We do maintain reserve apparatus for definite jobs.

Charles E. Lane, Chief, Great Falls, Mont.: Off-duty men are recalled by telephone. We get a response of approximately 75 per cent.

I believe we would get a better response if we allowed time off to the men who responded.

No additional pay is given for such emergency service.

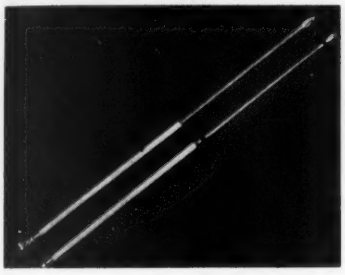
MANUFACTURERS' NEWS

Continued from Page 1074

tion with the Point 4 Technical Assistance Program overseas. His base of operations in New York State will be located in Syracuse.

Mr. Peters has been active in the radio and communication field for 20 years and since 1951 has been directly concerned with mobile radio as a communications specialist. His base of operations will be at 177 South Rocky River Drive, Berea, Ohio.

Javelin Nozzle Introduced



The Javelin Tool and Supply Co., 918 G. Daniel Baldwin Bldg., Erie, Pa., has announced the perfection of a new patented javelin type fire fighting nozzle. The new tool, including shutoff, is approximately eight feet long and consists of five sections: A piercing tip made from a manganese bronze casting; a 3½-foot long plain section of ¾-inch pipe; a 3½-foot insulated section wound with 3/16-inch cord for a firm grip and fitted with a hand shield; an adapter from ¾-inch pipe thread to 1-inch N.S.T., and an optional 1-inch N.S.T. to 1½-inch N.S.T. shutoff.

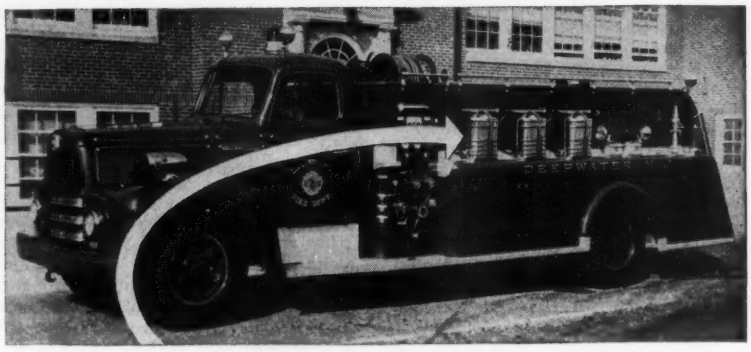
The nozzle reportedly may be successfully used with water, CO_2 and dry chemical for fighting fires in aircraft, autos, buildings, and baled or loose piled material. Discharge is rated at 18 gpm at 200 psi or 28 gpm at 600 psi. Further information is available from the manufacturer.

G-E Personnel Changes

The General Electric Company has announced the appointment of two district sales representatives and a district manager for their radio communication equipment.

Peter H. Bliss has been named district sales representative in the Columbus, Ohio, area with offices at G-E's regional communication headquarters, 1018 Atlas Building, on East Long Street. He was formerly a G-E communication engineer in Cleveland. He will be succeeded there by Edward C. Lapp.

Robert L. Toner has been named Philadelphia District Manager and will maintain district offices at the Post Office Building, Flourtown, Pa. His area will in-



INDIAN

FIRE PUMPS Complete Your Truck Equipment . . .

H. & H. Fire Apparatus Co., of Jersey City, N. J., built the above truck delivered to Deepwater Fire Department, Deepwater, N. J. It is equipped with chrome plated **INDIAN FIRE PUMPS.**

Famous **INDIAN FIRE PUMPS** are standard equipment on more and more new fire trucks. They have no equal for fighting so many types of small fires. They belong on *your* trucks, too.

"THERE IS NOTHING ELSE LIKE THEM"

"We have 6 of your **INDIAN FIRE PUMPS** on one of our fire trucks and we have used them 8 years. They are still **just like new.** They are the best things a fire department can have. I have used them for everything, including grass, house, barn, rubbish and many other kinds of fires. We like them very much. **There is nothing else like them.**"

EARL L. KOCH, Assistant Chief
Ann Arbor TWP F. D.,
Ann Arbor, Mich.

NO. 90
SLIDING PUMP TYPE

INDIAN FIRE PUMPS are approved by UNDERWRITERS' LABORATORIES

NO. 80
LEVER TYPE
Pump and Handle

For all Class A fires and many class B fires. Fire Chiefs say INDIANS are "worth their weight in gold."

SEND FOR NEW CATALOG

Pacific Coast Branch:
Hercules Equipment & Rubber Co., Inc.
San Francisco 7, Calif.

Canadian Agents:
Fleck Bros. Limited
Vancouver, B. C. Canada
C. E. Hickey & Sons, Ltd.
Hamilton, Ont., Canada
Bison Hardware Co.
Toronto, Canada

D. B. SMITH & CO.

"FOR 70 YEARS THE LEADERS"
406 Main St., Utica 2, N. Y.

clude much of Pennsylvania and New Jersey.

M. Jerry Jones has been named district sales representative in Redwood City, Cal., with headquarters at 565 Broadway.

High Fog Pump Has New Model

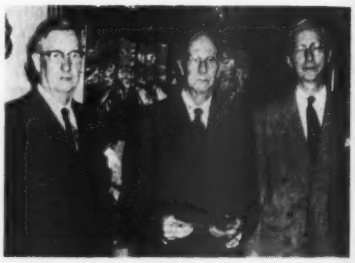
The manufacture of a bronze model of their high pressure 4-stage centrifugal pump is announced by High Fog Pump Company of Pasadena, Cal. The unit is designed for installation on new or existing equipment and will carry all the performance characteristics of the alloy iron unit now being produced by the company. It will deliver pressures to 1000 psi with volume from 120 gpm to 55 gpm fulfilling the requirements for both high pressure or volume. It will also meet specifications for Army, Navy and Air Force installation. For complete information, address High Fog Pump Company, 56 N. Hill Avenue, Pasadena, Cal.

Kidde Advances Young

Truman Young, manager of Market Development for Walter Kidde & Company, Inc., Belleville, N. J., has been appointed advertising and sales promotion manager of the company, according to an announcement by Paul W. Eberhardt, Kidde vice president. Mr. Young will serve Kidde in both capacities. He has spent more than twenty-five years in the promotion of fire extinguishing, detecting, and safety equipment.

222 Years of "Know-How"

The oldest employee of the Maxim Motor Company, Middleboro, Mass., Charles N. Warren, was honored recently by officials of the company at a dinner, and presented with a government bond, in recognition and appreciation of his 67 years of continuous service. He was Maxim's first full-time employee.



Veteran heads of two of the nation's leading apparatus companies honor oldest employee. Left to right: Ernest L. Maxim, Charles N. Warren and H. B. Spain, each of whom has been in the fire apparatus business for nearly three-quarters of a century

Participating in the celebration were Mr. H. B. Spain, chairman of the board of the Seagrave Corporation, Mr. Ernest Maxim, chairman of the board, Maxim Motor Company, Mr. J. C. Whitcomb, president of Maxim, Mr. Leighton L. Maxim, vice-president of the company, and also Mr. Earl Colegrove, Seagrave plant manager. Honored also, was "Cap" Homer M. Havens, recently retired chief engineer of Seagrave, who started with that company back in 1913.

The combined ages of Mr. Spain (70 years), Mr. Maxim (70), and Mr. Warren (82) constitute "222 years of fire truck know-how" as the newspapers had it.

Voice Communications for CD

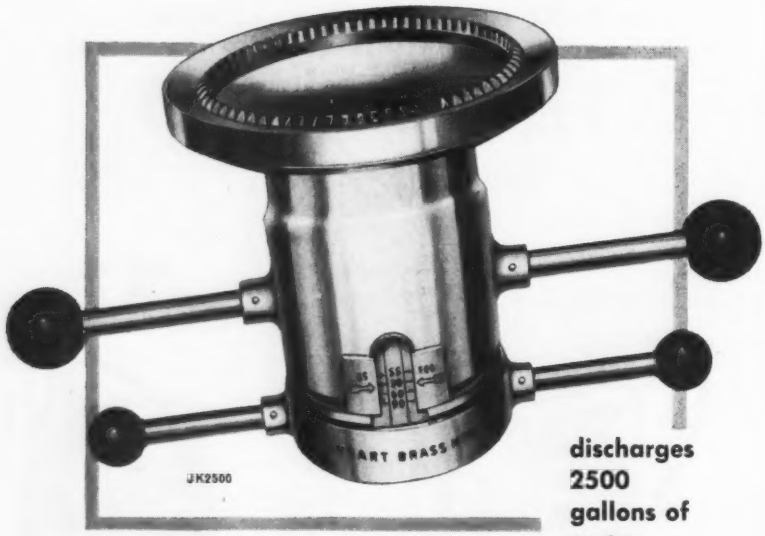
A new catalog describing the complete complement of voice communication systems for Civil Defense has just been issued by Audio Equipment Company, Inc., 805 Middle Neck Road, Great Neck, N. Y. Its 22 pages contain color illustrations, descriptions and various applications of the company's modern audio communications devices. For your copy, address the above.

Ansul Chemical Company Names Plouff Export Sales Manager

Promotion of L. Thomas Plouff, former manager of sales analysis and control, to the post of export sales manager for Ansul Chemical of Marinette, Wis., was announced today by Robert C. Hood, presi-

JUMBO KING

Mystery Fog Nozzle



discharges 2500 gallons of water a minute

Again — Elkhart paces the field! Jumbo King gives fog — both REACH AND VOLUME. Under actual test conditions this nozzle delivered 2500 GPM in a 30° fog position. In a narrow fog position it has a reach of 300 — 400 feet. Furnished with indicator for pre-selecting straight stream, 30° fog to 90°. The JK 2500 is recommended for use on deluge trucks and fire boats. Standard threads 4" N.S.T. can be adapted to other threads.

Write for complete information

for more than half a century

ELKHART BRASS MFG. CO., Inc.
Elkhart, Indiana

dent. Plouff succeeds the late C. Bernard Beidler.

David Piszczek, former assistant to Plouff, succeeds him as manager of sales analysis and control.

Plouff joined Ansul in 1939 and Piszczek came to Ansul's purchasing department in 1953.

FWD Introduces New European-type Aerial Ladder

G. F. DeCoursin, vice-president-sales, Four Wheel Drive Auto Company, has announced that FWD has acquired exclusive U. S. sales rights on Holland-manufactured Geesink aerial ladders and unveiled what is reported to be the first all-wheel-drive fire fighting truck with European-type aerial ladder assembly to be marketed in the United States at the International Assn. of Fire Chiefs Conference in Miami November 12-15.

The new truck with chassis-mounted aerial ladder—a four section ladder which folds down over the top of the vehicle—is less than 30 feet long with 213-inch wheelbase and boasts exceptional maneuverability. Its ladder, all steel with hydraulic drive and controls, is manufactured by Geesink N. V., a Weesp (Holland) company which has been making fire fighting ladders since 1902.

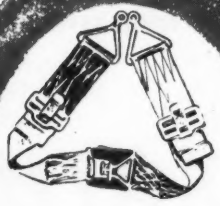
Known as the Model FG-85, it has an open-type three-man cab and full compartment-type body which provides ample space for equipment and 130 feet of ground ladders. The unit is available with pump and hose for water tower adaptations and its aerial also can be used as a lifting crane or rescue bridge. The Model 145 GK engine has 240 horsepower, 779 cubic inch displacement, and 595 lbs. torque. Transmission has five forward speeds, one reverse. Although the introductory model is equipped with an 85-foot aerial ladder, the new truck can also be furnished with Geesink 65, 75 or 107 foot or longer aerial ladders.

Elevation, extension and turning of the ladder may be accomplished simultaneously or separately. Speed of all movements can be accurately regulated by handily-grouped operating levers.

The fully-automatic ladder, which can be rotated in its complete turntable circle, has controls and indicators which provide preselection, within safe limits, of desired ladder positions. When activated, the ladder moves to the preselected position, first at high speed, then with automatically reduced speed as it approaches its final position. Change from high to low speed or vice versa, depending upon the operation, requires no separate handle adjustments. Simultaneous low-speed elevating and high-speed extending are possible, for instance, in preselection.

Desired and actual ladder positions register on the same indicator, which is integral with the control unit. The aerial has up to 10-degree automatic level-base-adjustment of the whole ladder diagram. Ladder erection with this adjustment, is completely independent of road inclina-

THEY LOOK ALIKE BUT THERE'S ONE IMPORTANT difference*



The important thing to look for in a safety belt* is . . . safety, not price or appearance. You can buy one that "looks just as good," but *the difference* is *in the job you want it to do!*

What job do you want your FIRE HOSE to do . . . look good?

Cost less? Of course not! *Look for the important difference–safety!*

*LIFE INSURANCE POLICY

The policy you have learned to depend on in the purchase of fire hose—Bi-Lateral's policy of putting safety *first*—is now your assurance in buying *safety belts,* too! Bi-Lateral sells the famous *Rupert* Safety Belt for tiller-men, for ambulances, squad car cabs or cars. Manufactured by the Rupert Parachute Co. They are "parachute tested" for all safety factors. Ask us for details and prices.

THE *SAFEST* INVESTMENT IS BI-LATERAL FIRE HOSE... IT COSTS *LESS* TO BUY THE BEST!

If you want *safety* AND *savings,* one way to be *sure* is to *look at the record!*

Bi-Lateral furnishes *FREE* hose record cards—send for your supply today.

Here's a sample piece of fire hose—it looks just like the piece below—yet . . .

This fire hose is worth 10 times—maybe 1,000 times—as much!

Bi-Lateral hose is built up to a standard not down to a price! There's a reason for Bi-Lateral—it's to put out fires! It will prove to be your most *economical* purchase as well as your *safest* investment!

(Bi-Lateral *IS* cheaper *in the long run.* Hose record cards prove it! Send for yours . . . free.)

Bi-Lateral FIRE HOSE CO.

20 NORTH WACKER DRIVE • CHICAGO 6, ILLINOIS

IN CANADA: Bi-Lateral Fire Hose, Kitchener, Ontario.

for on the spot treatment of burns.

safe - immediate relief!

HEXATHRICIN

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automatic **aerospra**

will help SAVE a life!

Healing is 28% faster.

You will find HEXATHRICIN Aerospra particularly valuable in emergency and routine treatment of burns of all natures and all degrees of severity. It may be used with exposure or closed or pressure dressings.

Specific for all fungus and bacterial infections of the skin—poison ivy, poison oak, and indolent ulcers such as varicose ulcers and bed sores.

For literature write—

Professional Service Dept.,

Lincoln Laboratories, Inc.

Box 1139, Decatur, Illinois

Write for Bulletin 6600-F

WEIGHS ONLY 110 LBS.

MORE **EFFECTIVE** FIRE PROTECTION

CITY • RURAL • FOREST

MODEL 6600 PUMPER—Instantly Self-Priming—No waiting when seconds count

HIGH PRESSURE—Use one or two hard-hitting streams or fire-blanketing fog-spray

LIGHT WEIGHT—Easily carried to source of water or fire area

NEOPRENE IMPELLERS—Pump dirty water as well as clean water—assure long life

POWER—Efficient 4-cycle, air-cooled 5 HP engine known and serviced world-wide

BY-PASS VALVE, SPRING LOADED GREASE CUP, NO LOSS OF PRIME, PLUS MANY OTHER FEATURES

UP TO 40 GPM AT 150 PSI

MARINE PRODUCTS COMPANY

515 LYCASTE AVENUE • DETROIT 14, MICHIGAN

tion and correction of influence occurs automatically in two directions—laterally in the plane of the ladder rungs, to bring the rungs horizontal, and in the inclination plane of the ladder.

The fully hydraulic ladder system provides complete safety precautions. Actual ladder load is shown on a special indicator and dangerous overloading stops the driving mechanism. Striking the ladder against a building stops the moving ladder without damage. Special control valves prevent capsizing the extended ladder through a simple locking setup based on a patented preselection principle.

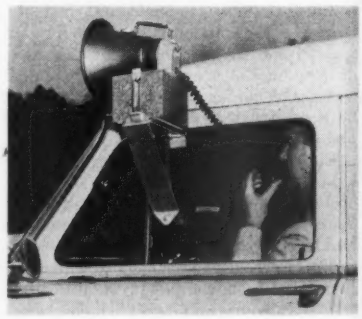
The helical, constant-mesh ladder gears operate on noiseless power takeoff from the truck drive shaft with a locking design that prevents simultaneous truck and ladder movement. In the event of engine trouble, all ladder movements can be manually operated with clutches disengaged.

McNeil Appointed To N. Y. by Acme-Hamilton Rubber

Acme-Hamilton Rubber Mfg. Corp., Trenton, N. J., announces the appointment of William McNeil as manager of its New York district sales office.

Mr. McNeil was formerly associated with Harnischfeger Corp. for eight years as sales engineer covering New York and New England territories, and prior to that with Gates Rubber Co. as a sales engineer in their Boston territory.

New High Powered Portable Loudspeakers



Sound-Craft Systems of Pittsburgh, Pa., manufacturers of Portapage portable loudspeakers, have introduced two new "Big-Voice" models to their line of portable systems, to fill requirements of fire, police and civil defense services and others, that require high volume sound output in heavy traffic, fire areas or at the scene of a disaster.

The new models use a transformer-coupled amplifier powered with heavy-duty batteries. Amplifier and batteries are enclosed in rust and corrosion proof case. A molded bakelite, noise cancelling mike is equipped with a lock-down type talk switch for either intermittent or continuous duty.

According to the manufacturer, the

Big-Voice models have an effective range of up to ½-mile. The picture shows the Model IB8-BV mounted on a Model CW window bracket. With this accessory any car or truck can be quickly converted to an emergency sound vehicle.

Graybar to Distribute Kidde Extinguishers

Appointment of the Graybar Electric Company as a distributor in the railway industry for the line of portable fire extinguishing equipment manufactured by Walter Kidde & Company, Inc. has been announced. Graybar will sell Kidde's complete line of Underwriters' Laboratories and Factory Mutual approved fire fighting equipment.

Surplus Property for Civil Defense

A recent amendment of Surplus Property Law 152 has included Civil Defense agencies as one of those eligible for surplus Federal Government property. It was stated at the time of announcement that $2 billion worth of property was available and that fire trucks, fire boats, rescue equipment, trucks, jeeps, automobiles and communications equipment were included, in addition to many miscellaneous items.

The surplus property is available to all Civil Defense agencies and is apportioned on a percentage basis among the 48 states. It is supplied by the Surplus Property Office upon payment of a small service fee and title remains with the Federal Government for a stated period of time.

Application for the materials must be made through Civil Defense channels and all directors have been supplied with lists of available equipment.

FCC Split-Channel Standards

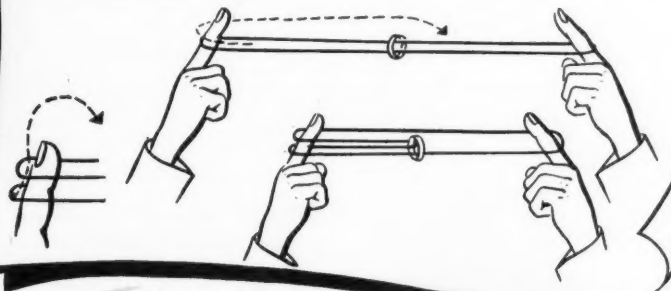
The Federal Communications Commission has adopted new technical standards to govern operation of equipment in the land mobile radio service from 50 to 1000 megacycles. The new standards affect public safety operations in the 152-162 mc band and are based on 30 kc channel separation. Blanket rules cover the 50 to 220 mc portion, and operating tolerances for the 220 to 1000 mc segment will be specified in the individual authorizations.

Present licensees operating in the 152-162 mc band must comply with the regulations by October 1, 1963. All new licensees must comply by November 1, 1958.

No changes were made in the 25-50 mc band although it was stated that this decision is subject to review at a later date. The FCC urged users of the lower band to consider the desirability of voluntarily employing equipment meeting the technical standards as those proposed for the split-channel operation.

AMAZE YOUR FRIENDS
WITH THIS TRICK

First, tie two ends of a piece of string together to form a loop, thread a ring onto the loop and put the ends of the loop over your friend's forefinger. Now, you proceed to remove the ring without taking the string from your friend's forefinger. The secret? — To remove the ring, take the string which is on the side nearest your friend's body (A in the drawing) grasping it to the right of the ring. Move this string over to your friend's right forefinger and make a loop around the finger, being careful to start the loop on the side of the finger that is toward your friend (see dotted line). Now slip the loop off that was originally around your friend's right forefinger and the ring will be released. In slipping off the original loop, bring it up *inside* the second loop, as in second drawing. If you bring it up outside the second loop, the ring will be knotted to the string.



AMAZE YOURSELF

. . . and you will be amazed when you find that positively no tricks at all are needed to make your BLACKINTON badge the center of attention whenever you wear it. The BLACKINTON look of fine quality speaks for itself because every BLACKINTON badge is artistically designed and expertly made. A BLACKINTON badge is a badge you can be proud to wear.

Ask your equipment supplier to show you the *new HI-GLO badge — the badge you can polish, polish, polish* and know that its rich lustrous finish will never disappear.

BLACKINTON

V. H. BLACKINTON & CO., INC., Attleboro Falls, Mass.

Among the Buffs

By Paul C. Ditzel

SO YOU THINK you're feeling your age and are tempted to hug the covers when the alarm bangs out a deuce or three-bagger? I'm a few days shy of 30 and am fairly worn out after hearing from Fire Buff George Bertsch who happens to be Chief of the West Point Military Academy Fire Department.

Chief Bertsch was the first and best track coach I ever had back in my prep school days when I was pounding the cinders in Buffalo, New York. At that time George was a captain in the Buffalo Fire Department, but had won greater fame in track competition against such all-time greats as Paavo Nurmi, Joie Ray, Willie Ritola and Edwin Wide. A record for the 3-mile-run he set in 1923 stood until this year when an Olympic Polish runner shattered the Niagara AAU district mark.

Chief Bertsch wrote from West Point that he is taking in the Olympic games in Melbourne and his flight will take him through Los Angeles.

What makes Chief Bertsch a truly incredible figure is his amazing stamina. I well remember one night in Buffalo when, as skipper of a hook and ladder, he caught a moldy attic job in the Black Rock section of Buffalo. He took a bad bellyful of smoke but bounced back a few hours later to win a mile race in a local AAU meet.

But hold everything. He hasn't stopped training to this day.

"I am in fine condition," he writes, "and just turned 1430 miles on my bike yesterday and am gunning for at least 2000 or more miles before I leave on my trip. Reduced from 174 pounds down to my old running weight of years ago and now weigh 156 and feel like a teenager. . . . Have been lucky, never having suffered a severe injury at any fire during my 40 years service and now I'm hoping to live to be 100. Haven't got any gray hair yet."

It so happens that Chief Bertsch is *62 years old!*

I have a bicycle myself and count myself lucky if I make a turn around the beach for eight miles at one lick. Of such things are buffs made! Maybe I should lay off the beer and pipes.

Speaking of Buffalo brings to mind that my attention was called recently to a story on buffs in the *Buffalo Courier-Express.* Mentioned prominently were Clarence W. Britton, (who says buffs in the old days were called house cats) J. Jay (Shorty) Wright, Jack Chambers, Claude Weal, Dr. Tom Murphy, Dr. Max Schneider, the Rev. Jim Chambers and the Rev. Tom Bingham.

Buffalo newspapermen among the clan include: Jerry Evarts, Jim Schrader, Jim Cleary, Cliff Preisigke, Dick Hirsch, Radiomen Gene Korzelius, Bill Maier, Gordon Redding and Pete Blake and Fireman Jack Supple of Truck 2 who is a fire-photographer-by-hobby.

I remember quite a few of these buffs from my days as a Buffalo newspaperman. I wonder whether Claude Weal and Carl Hitchcock ever settled their buffing feud? Or whether Jerry Evarts ever had to explain his expense account tab for a buck's worth of peanuts he bought the Saturday afternoon while we covered a two-bagger on Seneca Street. The peanuts happened to be for me, the opposition's reporter.

One of the most complete rundowns on Chicago I've ever received comes by way of John Phil McMahon, Chicago Fire Department alarm operator who went to considerable effort to supply me with the log of a 5-11 and 6 specials. SIX SPECIALS? Mrs. O'Leary's town is trying to steal a leaf from Baltimore and/or Philadelphia. The fire was in a 6-story brick Armour & Co. building being razed.

"Nothing to worry about exposure-wise," reports Mac, who took the fire in even though he was vacationing. "Just a 9-story Swift & Co. Laboratory to the north and three and four-story cooling buildings to the west."

Fire fan Henry F. Wood, 51 Fifth Ave., Pelham, N. Y., writes to inquire whether I'm the official spokesman for the International Fire Buffs Association, because he's anxious to join.

I hastily report that I am not the spokesman for the association and I sometimes wonder whether they have

CHIEF POWHATAN

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1-1/2" No. 250 Improved Industrial Fog Nozzle

Underwriters' Approved For Class A and B Fires

REDUCES Water Damage

DELIVERS a protective water curtain

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Straight stream or wide range of fog

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Scientifically Machined

Powhatan–Since 1892 in the same location–has long been one of the largest producers of Industrial Fire Protection Items. When designing our No. 250 Fog Nozzle, we knew that in order to maintain our high standard of quality we must produce a nozzle better than any on the market. We fully believe we have accomplished this. Several large industrial plants and large utilities have approved our nozzle. It is regularly furnished in Satin Finish. Other finishes can be supplied.

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Established 1892

one. By and large this column has been overlooked as an open forum for the association and whatever I've been able to report on the organization generally comes to me by way of Hong Kong. Their publicity man certainly is asleep at the alarm box as this column is always available to anyone with such information. I've prodded the association several times, but can only conclude they are not readers of FIRE ENGINEERING. (The "rebuffs" to that remark should provide me with enough to write about in this space for many months to come!)

Also via the mails: Bill Chapman, 231 North Stevens Avenue, South Amboy, N. J., would like to trade five-by-seven photos of apparatus with other fans.

Thanks to whoever sent me the "P.F.D. News" of the Philadelphia Fire Department. This is the department, you know, which has that top notch photographer, Bob Kennedy.

I just have time to mention that the Third Alarm Association of New York City reports its canteen put in 44 hours of service at the Wanamaker Fire and a fourth alarm soon after in Manhattan. Some of its members spent as long as 20 hours at the scene serving 50 gallons of milk and 80 gallons of coffee.

That's it for another month. You might change your records to show a new turnout location for the Ditzels. We've moved closer in to Los Angeles and our new address is 4234 Don Diablo Drive, Los Angeles. □□

Family of Five Dies In Fire

A 60 year old widow, three of her sons in their twenties, and a teen-age daughter died when fire swept their home shortly before 1:00 a.m. on October 11, 1956, in Stratford, Conn. The cause of the fire, which gutted the 1½-story frame residence, was attributed to a defective oil burner in the kitchen range.

A neighbor, awakened by her dog's barking, saw the flames shooting from

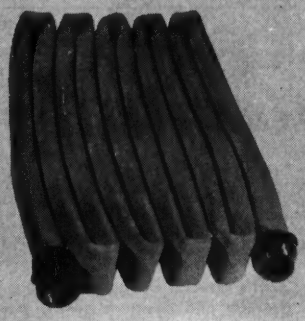
Inspecting the kitchen stove in which fire that killed a family of five in Stratford, Conn., is believed to have started, are Assistant Police Chief John B. Geary (kneeling), Fire Chief Theodore S. Lockwood, Town Manager Harry B. Flood and Police Captain Raymond E. Chaffee—*Photo courtesy Tom Magner*

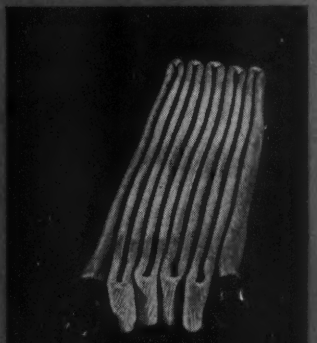
More FLEXIBLE COMPACT DURABLE Than

NOW with SEALCOTT "W"
. . . Hamilton's new effective fire hose protection against destructive mildew and rot.

HAMILTON Flexrite FIRE HOSE

CONVENTIONAL HOSE





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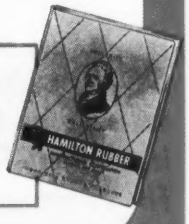
Flexrite, made with Dacron* chemically-produced polyester fiber filler cords, folds tighter, rolls closer and is 20% lighter.

*DuPont trademark

A reputation for integrity such as ours is not easily gained. Since 1870, our customers have continuously praised the reliability of our products . . . a reliability which has been attained only by obtaining quality from our Technical and Manufacturing departments at all times.

Write for the new 1956 catalog on our complete line of fire fighting hose for every municipal, industrial and forestry requirement.



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the house. She telephoned the alarm and then ran across the street in an attempt to arouse her neighbors. A police officer, first to arrive on the scene, said that the left side of the roof was a mass of flames when he reached the dwelling. He smashed a window in the front door but was driven back by the smoke and flames. He was joined by a police sergeant and both men attempted a second entrance but were driven back.

Fire Chief Theodore Lockwood stated that when the firemen arrived at 404 Dahl avenue, the roof was destroyed and there was fire in every room. He said the flames were visible to the firemen answering the call when more than a mile away. The bodies were found as soon as hose lines were brought into play and taken to Bridgeport hospital. Hospital attendants said all were burned.

Firemen, who described the fire as one of the worst tragedies in Stratford's history, found the body of John Talbot, 28, slumped beside an upstairs window where he had apparently collapsed while trying to escape. Mrs. Talbot and the other victims were found at the foot of the interior stairs, about 15 feet from the front door. Chief Lockwood said that from the position of the bodies it appeared that the family had been awakened by the fire but were unable to get out of the house.

Here's a break for hard-working firemen!

Dragon® Fire Pumps are designed with the fireman in mind...

1. They come completely assembled in a special carton. Just lift out the pump... fill with water... go into action!
2. The special Dragon harness is easy to get into and designed so the pump rides high where it can't throw the fireman off balance or interfere with walking.
3. Just a few easy strokes of the pump lever gives the operator a *continuous* flow of water he can direct right where it does the most good. And a mere twist of the shut-off nozzle gives either solid stream or spray *instantly*.
4. When he is using a Dragon Fire Pump, the fireman can take his hands off both shut-off nozzle and pump lever to use rake, shovel, or other tool.
5. There's no pump packing to dry out: even after standing idle for long periods, a Dragon Fire Pump is ready for instant use.

Yes, the way to boost firefighter efficiency and cut down fatigue is to specify Dragon Fire Pumps →

VALUABLE DISTRIBUTORSHIPS AVAILABLE, WRITE TODAY.

Dragon FIRE PUMPS

now available in 2 models

No. 150-S—Stainless Steel Tank

No. 150-G — Galvanized Tank: Cold-rolled steel, hot-dipped galvanized after fabrication.

All units equipped with brass pumps; all tanks seam welded. Capacity 5 gallons

DRAGON FIRE PUMPS meet Underwriters' Laboratories requirements and can be supplied with the UL label of inspection attached.

PARCO PRODUCTS COMPANY

PENNSBURG, PENNSYLVANIA

World-Wide Fire News

Fire Services Need Radiation Experts?

Do fire departments need radiation experts? Maine's Civil Defense Director, Col. Harry Mapes believes so. He told the state's Association of Fire Chiefs that in this day of threatened atomic or hydrogen warfare, every Maine fire department needs to be able to detect dangerous radiation.

Mapes told chiefs that their departments need (1) radiation detection equipment; and (2) men who know how to use it. He said the state civil defense and public safety forces have enough detection equipment on hand to provide some for every area of the state. However he said it can't be distributed until the men who will have charge of it know how to handle it.

In September a four-day, state-wide training school was to be held to train instructors on the use of such equipment and how to teach its application. To help speed training, Dr. Karl S. Woodcock, Bates College professor and expert in radiation measurement was added to the CD staff.

Maine detection equipment now includes Geiger counters, ion chambers, dosimeters and other devices, all provided free to the State by the FCDA.

Jack Kearns

From the World News Ticker

A fire in Taipei, Formosa on September 30, destroyed property estimated at $300,000 in value, leaving over 1000 persons homeless. . . . Seven farmers were burned to death in a forest fire in northern Syria near the Turkish border, October 3. Fire fighters fought the fire for several days. . . . An explosion, followed by fire on October 1, caused estimated damage of $15,000 to the home of singer Eddie Fisher and his wife, actress Debbie Reynolds, in Beverley Hills, Calif. Both Fisher and his wife, an expectant mother, were away at the time of the unexplained blaze. . . . Three persons were killed October 2 in an explosion in a fireworks factory on the Portuguese Island of Taipa, off Macao. . . . Russia has airborne firemen who play an important part in preserving the nation's timberland. . . . In Antibes, France, a bible-quoting laborer, Felix Roux, confessed setting forest fires along the Riviera because the Scriptures command that *"everything must be purified by fire."* More than a dozen forest and brush fires were started over a three-day period in September. . . . On September 28, Dirkzwagers Shipping Agency, Rotterdam, Holland, reported that a ship identifying itself as the Norwegian vessel "Heimdal," radioed its crew had taken to the lifeboats following an engineroom fire while the vessel was in the upper North Sea. . . . It is reported 76 passen-

gers were rescued from a burning Brazilian coastal vessel, the 1,249-ton "Carl Hoepcke," 15 miles off the port of Santos, Brazil on the night of September 28. Most of the crew of 31 remained aboard to fight the flames as the ship was towed toward Santos. . . . One of the worst fires in the Thames area was fought by firemen from a 40-mile area September 24. The blaze which involved an oil refinery on the Thames, near Southend, England, was finally controlled after three and a half hours. . . . One man was killed when fire raged through buildings on the edge of the French Quarter of New Orleans, La. on September 26. . . . Sen. J. Glenn Beall, R., Md., has proposed that civil defense volunteers get individual income tax deductions up to $600 a year. He said he will introduce legislation in 1957 that would provide a Federal deduction of about $4 for each hour spent in volunteer civil defense activities. . . . The second floor of the Arita Tile Co. building in Saga, Japan, collapsed October 3 in the midst of a lecture on safety by the company president. Of the 110 employees 48 were injured, twelve seriously. . . . On October 3, reports were received of the deaths of 23 persons in Multan, West Pakistan, when two buses collided and one turned over and burned. . . . Things were better earlier this year, in this country, when a Philadelphia-to-Pittsburgh Greyhound bus caught fire on the Pennsylvania Turnpike. The driver and 29 passengers abandoned the vehicle in safety. . . . According to a delayed report, when a fireworks blast rocked parts of Tokyo, 17 persons were killed and 65 were injured. The explosion had the impact of a one-ton bomb. . . . Havana, Cuba, was shaken by two sharp detonations in an army powder magazine on the Bay. All fire fighting forces in the city were called out to fight the resulting blaze. Windows a mile away were broken. The number of casualties was not reported. . . . School children of East Berlin gathered earlier this year, to burn Western comic books and other "trash" literature. Communists said comic books were undermining East German youth so members of the Young Pioneers gathered the printed matter, held a huge bonfire. . . . The body of a young Japanese pinball-parlor girl was recovered from the ruins of a fire that destroyed 52 shops and stalls in a congested area of Fukuoka. . . . Also, from Japan comes the report that Kamakura police arrested Takashi Ono, 26, a spirited "visiting fireman" from Yokohama for setting fire to an empty police stand.

"Fire Water" Gives River Real Kick

Residents of Rubiera, Italy, fled in fear on July 10th when a stream flowing through the town suddenly started spouting flames. The fire spread and damaged one house and a small machine shop.

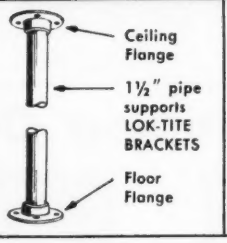
Police said it was real fire water. An Italian moonshiner's still caught fire due to the hot weather and spewed the flames into the nearby stream.

BEST SOLUTION TO YOUR HOSE STORAGE PROBLEMS

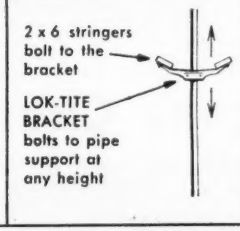
Photo Courtesy Wichita Fire Station No. 1

BUILD YOUR OWN RACKS WITH LOK-TITE BRACKETS

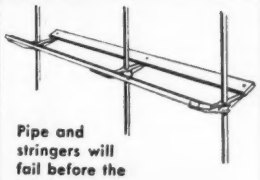
SIMPLE INSTALLATION

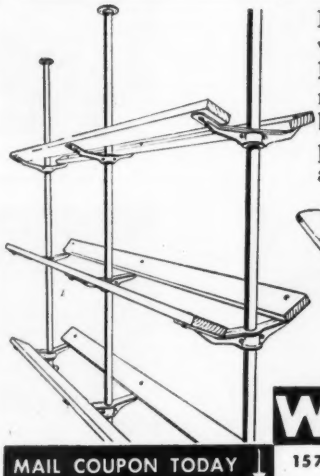


EASY ADJUSTMENT



BIG LOAD SUPPORT





Protect your hose with ample ventilation. Provide quick, easy access for use and inspection. Promote good housekeeping and make the most of your storage space, by planning and building your own racks – from new or used pipe and lumber, and handy, sturdy, fully adjustable Lok-Tite brackets.

Lightweight, high-strength aluminum alloy Lok-Tite brackets – designed for easy installation.

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Please ship_____brackets via

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name and title

Questions and Answers

wherein are answered questions relating to current problems in the fire protection

Multiple Choice Questions

Question: **If nationwide fire losses total $10 million, 60 per cent of such losses have occurred in (a) 1 per cent of the fires; (b) 5 per cent of the fires; (c) 8 per cent of the fires; (d) 14 per cent of the fires; (e) 21 per cent of the fires.**

Answer: Sixty per cent of the fire losses of the nation are accounted for by one-third of one per cent of the fires. Therefore (a) is the answer most nearly correct.

Question: **A nozzle with a 1⅛-inch tip has an effective horizontal reach of 80 feet. The nozzle pressure should be approximately (a) 38 psi; (b) 42 psi; (c) 47 psi; (d) 50 psi.**

Answer: Using the formula $S = \frac{1}{2}$ N. P. + 26 inches (for a ¾-inch nozzle and adding 5 feet to the 26 for each ⅛-inch increase in nozzle diameter, it will be found that the greatest nozzle pressure in the problem (50 psi) will give a range of only 66 feet. It would require 78 psi under the given conditions to have a horizontal reach of 80 feet. Therefore none of the answers given is correct.

Question: **Assuming a double 4-inch hydrant and sufficient water pressure, a discharge of 2,000 gpm can be obtained from which of the following mains (a) 12-inch and larger; (b) 10-inch and larger; (c) 8-inch and larger; (d) 6-inch and larger; (e) 4-inch and larger?**

Answer: The minimum size main for a 2,000 gpm discharge as shown by the discharge tables (Board of Underwriters of the Pacific) is 8-inch. Therefore (c) is the correct answer.

Question: **A pumper is operating at an engine pressure of 204 psi and pumping through a 2½-inch line equipped with 1¼-inch nozzle with a nozzle pressure of 60 psi. What is the length of the line? (a) 450 feet; (b) 500 feet; (c) 55 feet; (d) 600 feet; (e) 750 feet?**

Answer: Engine pressure minus the nozzle pressure equals the total friction loss for the layout. If the friction loss per 100 feet can be determined, the length of the line may be found by simple division. In order to find the friction loss per hundred feet, it is necessary to know the quantity of water flowing under the stated conditions.

Discharge = 29.7 × nozzle diameter squared × the square root of the nozzle pressure, or

$$Q = 29.7 \times d \times d \times \sqrt{P}$$
$$= 29.7 \times 1.25 \times 1.25 \times \sqrt{60}$$
$$= 29.7 \times 1.56 \times 7.75$$
$$= 354 \text{ gpm}$$

Determine the friction loss by the formula $2Q^2 + Q$

$$\text{F. L.} = 2 \times 3.54 \times 3.54 + 3.54$$
$$= 2 \times 12.5 + 3.54$$
$$= 28.5 \text{ pounds per 100 feet}$$

$$\text{F. L.} = \text{E. P.} - \text{N. P.}$$
$$= 204 - 60$$
$$= 144 \text{ pounds total}$$

$$\text{Length of line} = 144 \div 28.5$$
$$= 5.06 \text{ (in hundreds) or 506 feet.}$$

The correct answer is therefore (b).

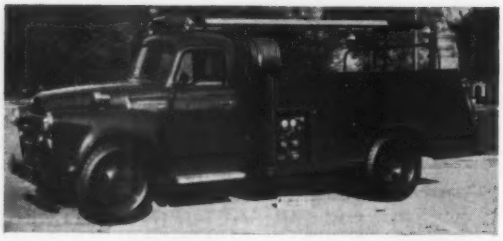
Question: **Four siamesed 2½-inch lines each 600 feet long carry a combined quantity of 800 gpm. The friction loss is most nearly (a) 30 pounds; (b) 50 pounds; (c) 65 pounds; (d) 80 pounds; (e) 130 pounds.**

Answer: Find the friction loss per hun-

Recent Champion Deliveries

U. S. Vets Adm. Hospital, Hines, Ill.

Sohio Petroleum Co., Latonia Refinery, Covington, Ky.



City of Rossville, Rossville, Tenn.

Cedar Hammock Vol. Fire Co., Bradenton, Fla.

If you're in the market for new fire apparatus for your community write the above new Champion owners—let them tell you man-to-man why they selected Champions for their Depts. (our best ads are written by our customers).

Write for Fire Equipment Catalog and Fire Apparatus Booklet

AT YOUR SERVICE: Sales and Service Representatives—East, Midwest, North, South

You'll want to know all about our low cost finance plan or combination PURCHASE-RENTAL plan.

W. S. DARLEY & CO., Chicago 12

Factories — Chicago and Chippewa Falls, Wis.

dred feet using the standard formula, divided by the factor for four lines. Multiply the answer by 6.

Thus: $\text{F.L.} = \frac{2Q^2 + Q \times 6}{\text{Factor}}$

$= \frac{2 \times 8 \times 8 \times 6}{12.4}$

$= 136 \div 12.4 \times 6$

$= 10.95 \times 6$

$= 65.7$ psi

Therefore (c) is the correct answer.

Question: **When planning a relay operation, the officer in charge should figure the maximum pressure at each pump to be about (a) 100 psi; (b) 150 psi; (c) 200 psi; (d) 250 psi; (e) 300 psi.**

Answer: The most generally used figure for "set" relays is 200 psi. However, some instructors teach a method of calculation for each individual pump and situation. In many areas the maximum pressure is determined by the hose test pressures in force and therefore is a matter of local decision. Answering a question of this type is very difficult due to the variables involved. All of the pressures listed have probably been used in relays before this time and can be considered equally correct. We cannot say that one is more correct than another.

September Fire Losses

Estimated fire losses in the United States during September amounted to $70,118,000, the National Board of Fire Underwriters has reported.

According to Lewis A. Vincent, NBFU's general manager, this $70,118,000 represents a decrease of 6.4 per cent from losses of $74,930,000 reported for August, 1956 and an increase of 6.3 per cent over losses of $65,970,000 reported for September, 1955.

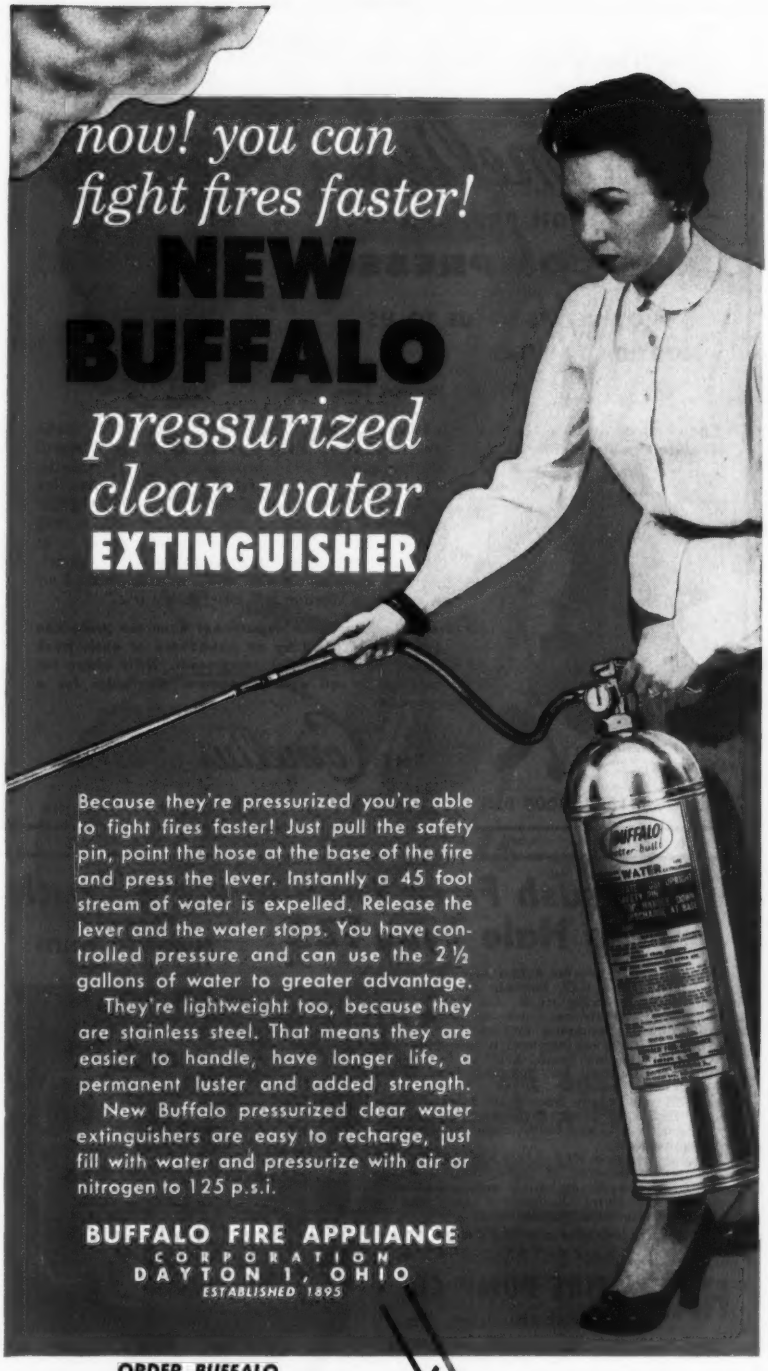
Losses for the first nine months of 1956 now total $731,203,000, an increase of 9.4 per cent over the first nine months of 1955, when they amounted to $668,444,000.

These estimated losses include an allowance for uninsured and unreported losses.

Recent FCC Taxicab Ruling Clarifies CD Muddle

Since the inception of Civil Defense some fire service officials have wondered what the limits of authority and responsibility were in matters concerning radio communications when involved in Civil Defense activities. The Federal Communications Commission has helped clarify the situation with a recent ruling that clearly outlines the responsibilities of a station licensee. The case involved is not in the fire service but the implications are clear that the regulations apply to all services licensed by the FCC.

In returning applications from the Yellow Cab Company, Philadelphia, Pa., for five base station transmitters on separate taxicab frequencies, the Federal Communications Commission has cleared up a muddle that has existed since the be-


now! you can
fight fires faster!
NEW
BUFFALO
pressurized
clear water
EXTINGUISHER
Because they're pressurized you're able to fight fires faster! Just pull the safety pin, point the hose at the base of the fire and press the lever. Instantly a 45 foot stream of water is expelled. Release the lever and the water stops. You have controlled pressure and can use the 2½ gallons of water to greater advantage.
They're lightweight too, because they are stainless steel. That means they are easier to handle, have longer life, a permanent luster and added strength.
New Buffalo pressurized clear water extinguishers are easy to recharge, just fill with water and pressurize with air or nitrogen to 125 p.s.i.
BUFFALO FIRE APPLIANCE
CORPORATION
DAYTON 1, OHIO
ESTABLISHED 1895
ORDER BUFFALO
FIRE PROTECTION FROM YOUR
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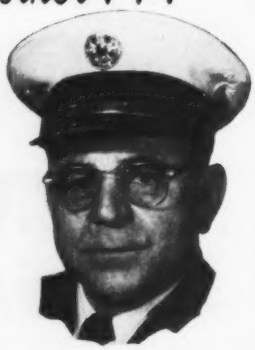
he's listed in the yellow pages
BUFFALO
better-built
the right extinguisher for every
fire hazard . . . plus a complete
line of brass goods and hose

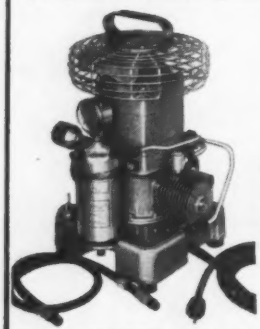
From one chief to another . . .

"The *Cornelius*
HIGH PRESSURE
AIR COMPRESSOR
IS PROVING ITS VALUE TO US
MORE DAY-BY-DAY"

— Chief W. L. Hydaker, Lima, Ohio



The chief commends the Cornelius Compressor in his annual report: "The bank of cylinders containing washed compressed air which we installed at our Central Station during 1954 proved to be very unsatisfactory, and we purchased and placed in service during 1955 a Cornelius 3000 p.s.i. air compressor which has solved the problem of keeping our Air-Pak cylinders at the proper pressure at all times, and in addition, it enables this department to keep an ample supply of compressed air in cylinder storage for emergency use."



Model 130R1500 (3000 PSI)

Be sure the men in your department have the protection and confidence inspired by an abundance of pure, fresh air supplied by a Cornelius compressor. Write today for FREE catalog or call your equipment distributor for a demonstration.

THE *Cornelius* COMPANY
550 39th Avenue N.E., Minneapolis 21, Minnesota

Fight Brush Fires From Moving Truck with a Hale Type FZZ

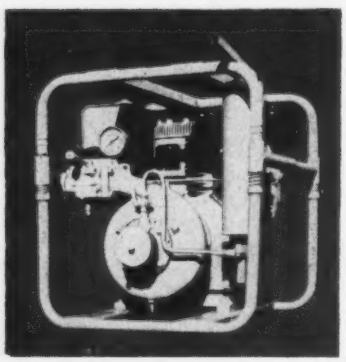
PORTABLE PUMPING UNIT!

Picture below shows fire-fighter handling stream from a Hale Type FZZ Portable Pumping Unit mounted on a moving truck. An FZZ can be mounted permanently on truck or carried as a portable unit for pumping into or *from* booster tank. This portable arrangement is extremely useful both for fighting brush, field or forest fires while in motion; or for pumping from pond, stream or well direct.

An FZZ will supply from draft 2 capable fire streams thru 1½" lines. Performance substantially exceeds NBFU and NFPA capacity and pressure requirements.

A frame-mounted FZZ (with carrying handles turned in) is pictured at right. Also available mounted on two wheels or on rubber-cushioned steel channels. **Note:** Discharge Adapter can be supplied for use with 2½-inch hose.

** Write today for new FZZ Folder.*
Let us know if you want a demonstration.



HALE FIRE PUMP CO.
Conshohocken, Pa.
Fire Pumps in All Standard Capacities

NOTE:
FZZ
Now Has
NEW—
- Ball-Type Valve
- Mechanical Seal
- Improved priming

ginning of Civil Defense. The cab company intended to install the transmitters in a Civil Defense mobile unit and use them to dispatch cabs already in the Philadelphia area and those sent into the city on Civil Defense errands.

The FCC pointed out that Yellow Cab may apply "only for one or more auxiliary base stations on its own frequency" and ruled that "your company, as licensee, must have complete control over the stations at all times whether or not they are being used for Civil Defense activities."

The Commission stated further: "As evidence of this control, you should submit with your application a copy of an agreement with the appropriate Civil Defense officials affirming your right, as licensee, to control of the radio stations, and unrestricted right to enter or leave the Civil Defense vehicle or other location at any time to operate, service and maintain the equipment."

In addition, FCC said, "the agreement must show that the transmitter will be rendered inaccessible to unauthorized personnel. In short, it must be thoroughly understood that you, as licensee, and not the Civil Defense officials, are in control of the operation of the station and retain full responsibility for its operation."

The Commission also explained that "FCC-licensed radio systems, including auxiliary base stations of those systems in the Civil Defense vehicles, may be used by the licensee only, in the conduct of Civil Defense activities assigned to them in the local Civil Defense plan."

MASKS

Continued from page 1070

was driven out by the heavy smoke and flames. Meanwhile, other fire equipment had reached the scene. Firemen Herman Villhauer and John Fay quickly slipped on the demand masks, purchased only two months before. After a quick briefing by Chief Dolezal, the two firemen entered the burning home, climbed the stairs and began a thorough search of the baby's bedroom. Villhauer's foot touched something. It was Ruth Ann, partly covered by a blanket. "Over here, John," he called. Together, the two firemen, conversing through their masks' speaking diaphragms, located the baby.

Ruth Ann and Vernon, both unconscious, were taken outside where prompt and efficient use of resuscitators restored their breathing. Mr. and Mrs. Daniel C. Griffin, parents of the children, had been away less than an hour, buying groceries. They returned just as the girl and baby were being revived.

A faulty connection in the furnace piping caused the blaze, firemen determined later. The bedroom in which the children were found was completely destroyed.

Dozens of congratulatory letters, gifts, a two-week visit to a ranch, and a special citation from Edward J. Herron, fire marshal of Iowa, were bestowed upon Ruth Ann for her rescue efforts. "Your brave deed in the rescue of your brothers and sisters has endeared you to all those in the fire service," Fire Marshal Herron said.

What's Burning?

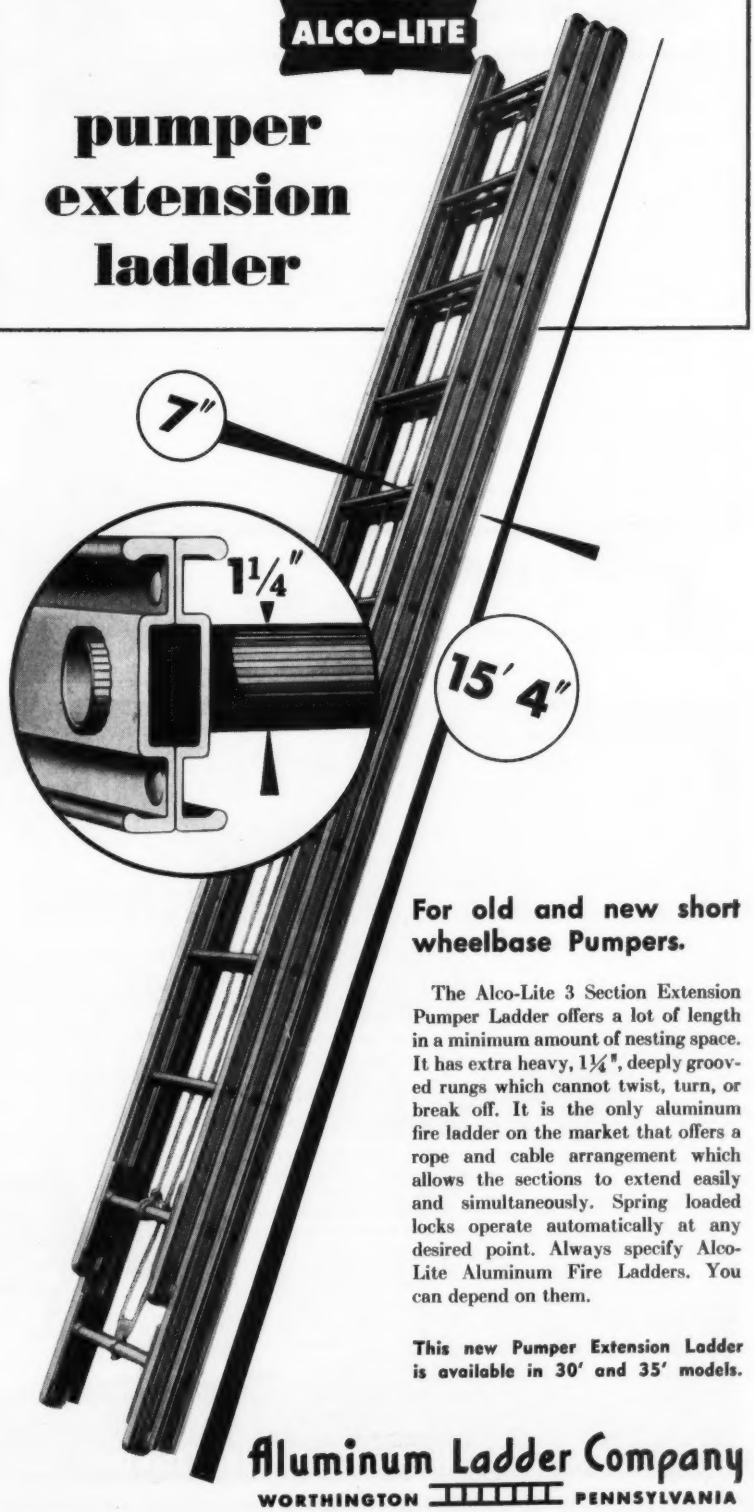
THE FOLLOWING LIST includes fires of $10,000 and over in the United States and Canada for the period from September 17th to October 22nd.

Saraland, Ala.—Shopping Center, U. S. 43, housing grocery, dry goods store, barber shop, launderette, beauty shop and television appliance store, destroyed.
Bono, Ark.—West Side Cotton Gin destroyed.
Earle, Ark. — Earle Wholesale Grocery Co. building destroyed.
Leachville, Ark.—Five thousand bales of cotton in cotton compress destroyed.
Pine Bluff, Ark.—Planters Cotton Oil Mill building and three railroad cars damaged.
Pocahontas, Ark.—Shannon Cotton Gin, five miles south, destroyed.
Star City, Ark.—Star Ice Co. plant damaged.
Bandini, Cal. — Allis-Chalmers Manufacturing Co., electrical transformer assembly plant, damaged.
Huntington Park, Cal.—L. R. Smith Hardwood Co. and L. M. Schofield Building Specialties Co. damaged.
Los Angeles, Cal.—Handcraft Textile Printing Co. and four apartment dwellings damaged.
Oakland, Cal.—Showboat Restaurant destroyed. Defective wiring.
Richmond, Cal.—Lo-Ray Market damaged.
Robbins, Cal.—State Ranch Bend warehouse and barn owned by Harold Benner, two miles west in Sutter County, destroyed.
San Francisco, Cal.—Two warehouse buildings destroyed, a third damaged at U. S. Navy's Treasure Island Base.
San Mateo, Cal.—Vowell Furniture Co. damaged. Discarded cigarette.
Santa Clara, Cal.—Ersted Manufacturing Co. damaged.
Franklin, Conn.—Poultry house on John L. Laterra farm, Route 32, destroyed.
Stamford, Conn.—Auto agency, adjoining drug store and woolen shop damaged.
Selbyville, Dela.—Delaware Holly Co. destroyed. Sparks from electric swirling machine.
Atlanta, Ga.—Administration building at Emory University damaged.
New Smyrna Beach, Fla. — Bank of New Smyrna damaged.
Boise, Ida.—University of Idaho damaged. Arson.
Alton, Ill.—Slack Furniture Store damaged.
Belleville, Ill.—Samson Furniture Co. warehouse damaged.
Carrollton, Ill.—Simpson Furniture Store and warehouse and Rohs Hardware Store warehouse destroyed; Masonic building damaged.
Chicago, Ill.—Building housing Atwood Paper Co., stationery manufacturer; Anle Paper Co., box and bag company; Process Corp., greeting card company, damaged.
Chicago, Ill.—Building housing Three Dimensions Display Advertising Co. damaged.
Chicago, Ill.—Building housing North Shore Hardware Co., Rustic Inn Restaurant and Lakeview Bar-B-Q damaged.
Chicago, Ill.—Warehouse and repair shop damaged.
Marion, Ill.—Dan Odum grocery, another grocery and clothing store, destroyed.
Decatur, Ind.—Pennsylvania Railroad warehouse shared by Bag Service, Inc.; Central Soya Co. and Decatur Industries, Inc., destroyed.
Greenwood, Ind.—Kelly Auto Sales building destroyed.
Remington, Ind.—Von Tobel Lumber Co. damaged.
Baxter, Iowa—Building housing Baxter Mercantile store and apartments destroyed.
Burlington, Iowa—Building housing Television Antenna Co. destroyed. Spark from welding torch.
Council Bluffs, Iowa—Scoular-Bishop Grain Elevator destroyed.
Davenport, Iowa—Mueller Lumber Co. warehouse damaged.
Emmetsburg, Iowa — Albaugh Pontiac-Cadillac garage destroyed.
Fort Dodge, Iowa—Barn on Rasch Turkey Farm destroyed.

a NEW 35 ft.

ALCO-LITE

pumper extension ladder



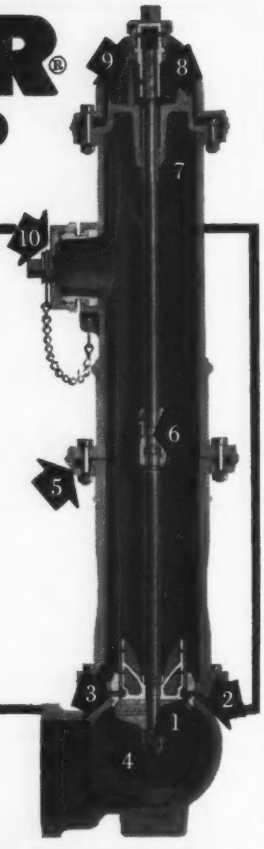
For old and new short wheelbase Pumpers.

The Alco-Lite 3 Section Extension Pumper Ladder offers a lot of length in a minimum amount of nesting space. It has extra heavy, 1¼", deeply grooved rungs which cannot twist, turn, or break off. It is the only aluminum fire ladder on the market that offers a rope and cable arrangement which allows the sections to extend easily and simultaneously. Spring loaded locks operate automatically at any desired point. Always specify Alco-Lite Aluminum Fire Ladders. You can depend on them.

This new Pumper Extension Ladder is available in 30' and 35' models.

Aluminum Ladder Company
WORTHINGTON PENNSYLVANIA

MUELLER®
AWWA IMPROVED FIRE HYDRANTS



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Mueller Hydrants use compression type main valves (1) that close with water pressure, permit repairs without water shut-off. Double drain valves (2) are part of the main valve and are force-flushed when hydrant is operated. Seat ring (3) and cap nut (4) are non-corrosive bronze. Flange (5) and stem coupling (6) break on impact, eliminating barrel and stem damage. "O"-ring seals (7) around stem are water-tight. Oil reservoir (8) lubricates threads and bearing surfaces. Dry top design (9) keeps water from operating surfaces. Nozzles (10) are breech-locked and calked to stop blowouts. *Mueller Hydrants are* always *ready—for fire emergency. Write for information or contact your Mueller Representative.*

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YOUR EFFICIENCY!
The accelerated tempo of modern times demands modern techniques plus stepped-up efficiency. Fire departments everywhere find the Super Vacuum Smoke Ejector provides the extra margin of efficiency necessary in modern day fire fighting. New and revolutionary in design, Super Vacuum will outperform other fans twice its size... gives the positive, controlled ventilation essential to the prompt, efficient control of fires.
CONTROL VENTILATION
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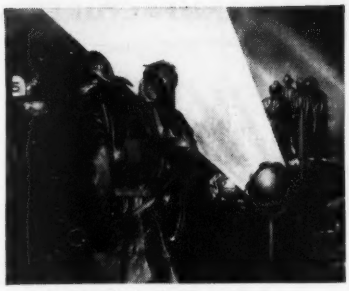
The heart of the SUPER VACUUM Smoke Ejector is the patented propeller. Conventional fans produce a chopping, recirculating action. In contrast, the SUPER VACUUM propeller is a perfect spiral air screw which creates a vacuum...suction is created over the entire face of the propeller and the air or smoke is discharged in a high velocity spiral. There are no dead spots.
THE HEART OF THE SUPER VACUUM
WRITE FOR ADDITIONAL INFORMATION OR CONTACT YOUR LOCAL FIRE EQUIPMENT DEALER
MANUFACTURED BY
Super Vacuum MANUFACTURING CO. INC.
319½ E. 17th Ave., Denver 3, Colorado

Keosauqua, Iowa—Barker Equipment Co. plant damaged.
Sioux City, Iowa—Sioux City Brick & Tile Co. building destroyed.
Louisville, Ky.—Henderson Electric Co. damaged.
Mayking, Ky.—Tipple at Liberty Elkhorn Mining Co. destroyed.
Grand Prairie, La.—Cotton gin destroyed. Butane gas pipe hit and exploded.
Kenner, La.—Mancuso Barrel and Box Co., Inc. damaged.
Lake Charles, La.—Powell Lumber Co. destroyed.
New Orleans, La.—Five buildings on edge of French Quarter, including bar and apartments, damaged.
Storm Lake, La.—Administration building at Buena Vista College destroyed.
Belgrade, Me.—Belgrade Hotel destroyed.
Baltimore, Md.—Building of William H. Cole & Sons, Inc., damaged.
Cumberland, Md.—Cumberland Glass Co. and Queen Glass Co. plants destroyed.
Easton, Md.—Building of J. McKenney Willis and Son destroyed.
Boston, Mass.—Holy Trinity Catholic Church and rectory damaged.
Quincy, Mass.—Merrymount Laundry damaged.
Britton, Mich.—Five silos owned by J. J. Walper & Son Grain & Feed Elevator, along with five trucks and three boxcars, destroyed.
Cedar River, Mich.—General store and tavern damaged.
Central Lake, Mich.—New Home Coach Co. plant destroyed.
Charlevoix, Mich.—Sunset Lodge, resort hotel, destroyed.
Detroit, Mich.—National Food Co. warehouse and adjoining Misco Fabricating Co., metal products plant, destroyed.
Eaton Rapids, Mich.—Long Grain & Bean Co. elevator destroyed.
Grand Rapids, Mich.—American Excelsior Corp. pulpwood plant damaged.
Ravenna, Mich.—Ravenna Co-operative Co. grain elevator destroyed.
Saginaw, Mich.—Bondell's Store for Men damaged.
St. Clair Shores, Mich.—Brownie's-on-the-Lake Tavern destroyed; adjoining warehouse and cruiser at dock damaged.
St. Clair Shores, Mich.—Todd's Palm Room, bar and dance hall, destroyed.
Three Rivers, Mich.—Service garage and repair shop of James Wyatt, excavating contractor, destroyed.
Traverse City, Mich.—Grand Traverse Auto Agency and Federal agricultural agency destroyed.
Pontotoc, Miss. — Two cotton seed storage houses at Pontotoc Oil Mill damaged.
Kansas City, Mo.—Reeves-Weidman Building, housing wholesale plumbing company, destroyed.
Black Eagle, Mont.—Triangle Tire Co. plant destroyed.
Helena, Mont.—Green Meadow stock farms destroyed.
Kalispell, Mont. — Kalispell Furniture storage warehouse destroyed.
Haledon, N. J.—Morningside Florists damaged.
Jersey City, N. J.—Price Fighters Furniture Co. damaged.
Lodi, N. J.—Farmer's Market, Route 46, destroyed.
Woodbridge, N. J.—Valentine Fire Brick Co. destroyed.
Buffalo, N. Y.—Warehouse owned by Jakiel Lumber Co. damaged. Boys with matches.
Haw River, N. Y.—Building housing The Remnant Shop of Haw River, Inc., and Remnants and Textiles, Inc., destroyed.
Lockport, N. Y.—Two small hangers and ten light planes destroyed at Graf Airport. Explosion.
Oakfield, N. Y.—Two barns on Henry Kelsey farm destroyed.
Perry, N. Y.—Barn on William Graham farm, seven miles north, destroyed.
Rochester, N. Y.—Seneca Hotel damaged. Overheated bearing in laundry room mangle.
Rome, N. Y.—Lerman Furniture Store warehouse damaged.
Salamanca, N. Y.—Main building of Fitzpatrick & Weller, shoe-last plant, destroyed.
Swan Lake, N. Y.—Firehouse and Colonial House destroyed.
Asheville, N. C.—Clubhouse at Municipal Golf Course destroyed.
Charlotte, N. C.—Pine Harbor Club, fishing,

dining and dancing spot on Catawba River, destroyed.
Charlotte, N. C.—Park and Shop Food Center super market destroyed.
Greenville, N. C.—New Enterprise warehouse destroyed.
Greenville, N. C.—Dixie Warehouse destroyed.
Bismarck, N. D.—The Ranch House, eating place on U. S. Highway 10, between here and Mandan, destroyed.
Elmore, Ohio—Barn on Edward Durdel farm, three miles north, destroyed.
Lebanon, Ohio—Better Laundry & Dry Cleaning Co. plant, U. S. 42, damaged.
Spencerville, Ohio—Nameplate & Monogram Co., Allen County, destroyed.
Wickliffe, Ohio — Administration building at Rabbinical College of Telshe destroyed.
Williston, Ohio — Two buildings of Pfeiffer-Buhrow Implement Co. destroyed.
Clinton, Okla.—Clinton-Sherman Air Force Base building housing chapel, gym, post exchange and club room, destroyed.
Coos Bay, Ore.—Coston Shingle Mill destroyed.
Cottage Grove, Ore.—Cottage Grove Gas Co. plant destroyed.
Hood River, Ore.—Neal Quick Lumber Co. destroyed.
Klamath Falls, Ore.—Enterprise Pumping plant destroyed.
Medford, Ore.—Donna Timber Co. damaged.
Newberry, Ore.—Springbrook Packing Co. destroyed.
Harrisburg, Pa.—Barn on Chester M. Glassbrenner farm, R. D. 1, destroyed. Lightning.
Hazelwood, Pa.—Ames Methodist Church damaged. Arson.
Irwin, Pa.—Building housing Gem Restaurant, Underhill Cleaning Shops, B & B Bowling Alleys, Patterson Realty Co. and apartments, damaged.
New Philadelphia, Pa.—Blythe Township School damaged.
Nottingham, Pa.—Barn on property of John Kimble destroyed.
Pittsburgh, Pa.—Eighteen wall-to-wall apartment dwellings in Garfield Section, damaged.
Warren, Pa.—Storage tanks and pump house at United Refining Co. plant destroyed.
Columbia, Tenn.—Oakes Chair Co. plant damaged.
Greenville, Tenn.—Farmers Cooperative Warehouse destroyed.
Harrogate, Tenn.—Jones Lumber Co. damaged.
Hartsville, Tenn.—Hartsville Tobacco Warehouse destroyed.
Memphis, Tenn.—Delta Warehouse destroyed.
Dallas, Tex.—New York Merchandising Co. warehouse damaged.
Dallas, Tex.—Southern Plaza Express, Inc., engine overhaul plant, damaged.
Gainesville, Tex. — Two cotton warehouses leased by Agriculture Enterprises and dwelling damaged.
Colfax, Wash.—Colfax Hotel destroyed.
Tacoma, Wash. — Buffelin Woodworking Co. damaged. Spontaneous ignition.
Grand Island, Wyo.—Miller Roofing Co. warehouse housing Dryers Bakery and Glovers Ballroom, destroyed.
Cowicha Bay, B. C.—Buena Vista Hotel destroyed. Explosion.
Cobalt, Ont. — Cobalt Consolidated Mining Corp., silver ore processing plant, destroyed.
Port Arthur, Ont.—Manitoba Pool Elevators' Terminal No. 6 damaged. Explosion.
Toronto, Ont. — Associated Advertising, Ltd., silk screen plant in suburban North York, damaged.
Toronto, Ont.—Old Port Credit High School damaged.
Ville St. Michel, Que.—Stone conveyor plant of Montreal Quarry Ltd., destroyed.

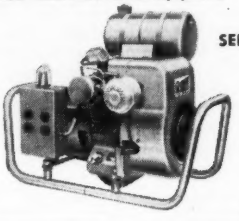
Conelrad Manual Available

A "Conelrad Manual or Guide for Public Safety Radio Services" has been approved by the FCC. It explains how stations in the public safety service may be alerted and operated in accordance with the Conelrad program that becomes effective January 1, 1957. Single copies of the publication are available on request from the Federal Communications Commission, Washington 25, D. C.



1. Carry them by hand right up to the fire...operate power tools and lights.

2. Mount them on rigs to power searchlights and other motor-driven equipment.



SERIES 105AK
1,500 watts;
125 pounds

ONAN Electric Plants help you fight fires all 3 ways!

ONAN portable models combine light weight with 4-cycle quick starting, long life and all-around dependability. Quick release bases are available on many models permitting instant removal of the units from fire rigs. Onan Standby Plants from 1,000 to 50,000 watts assure electric power for fire stations, headquarters departments and radio communications. Air-cooled models can be equipped with Onan's exclusive Vacu-Flo cooling system allowing installation in closed rooms or compartments.

3. EMERGENCY STANDBY POWER
Installed in the fire station or department, they supply all electricity required when power is interrupted.

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Onan ELECTRIC PLANTS

CAIRNS

LEATHER
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FIRE HELMETS SINCE 1836

"THERE IS NO SUBSTITUTE FOR EXPERIENCE"

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WHY DO MOST FIRE EQUIPMENT MANUFACTURERS-

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For Fittings Made to Their Specifications?

The reason is — knowhow. Our modern and complete facilities enable us to start from manufacturers' blueprints and develop special fittings all the way to the final brilliant finish. Manufacturers know, too, ATTWOOD quality is rigidly controlled, while ATTWOOD'S dependability has been proven countless times in actual service. Check with us on your special requirements.

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ARMY DUCK
WATER REPELLENT FINISH
BLACK OR WHITE

Lined with Rubberized Flannel

No. 50

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Persons in the News

Chief Frank Maddux Cited by Veterans Administration

Frank Maddux, chief of the protection services at the Veterans Administration Hospital in Walla Walla, Wash., has been awarded a Superior Accomplishment Award by the national VA. With it went a sizeable check.

The award was given him "for his skill, accuracy and dependability in conducting the fire and safety program and for continuing good public relations in the community."

Chief Maddux has been a member of the staff of the VA hospital since 1920, when he was hired as a guard. He was named chief guard in 1925, fire marshal in 1928, and when the hospital installed a full-time fire department in 1946, he had charge of it. It was largely due to his training methods that a full-time department no longer was needed at the hospital.

One of Chief Maddux' accomplishments was the establishment of a program for teaching hospital personnel how to evacuate patients in case of fire or other disaster. This program drew a request from the New Jersey State Hospital for him to set up the program in that 3,500-bed institution in Trenton. His training program has been picked up locally by St. Mary's and Walla Walla General Hospitals and by the Odd Fellow's home.

Burdine succeeds Engler in Rapid City

Glen W. Burdine, 38, a member of the Rapid City, S. D., Fire Department since 1948, succeeds retiring Chief George A. Engler.

The new chief was a member of the Sioux Falls Fire Department from 1942 to 1948, when he moved to Rapid City and joined that department. He was made drillmaster in 1952. He helped organize the Rapid City Firemen's Association and the Uniformed Firemen's Association of South Dakota.

In a dinner honoring retiring Chief Engler, he was presented with a gold watch by the Firemen's Association.

Chief George Gebelein Retires

Fire Chief George E. Gebelein of the Blackwell, Okla., Fire Department has retired after nearly 45 years of continuous service, the past 11 years of which he served as its head.

Slevin Appointed by NBFU

Lewis A. Vincent, general manager of the National Board of Fire Underwriters has announced the appointment of W. Victor Slevin to the position of adminstrative assistant. Mr. Slevin was formerly with the Federal Bureau of Investiga-

tion and the Army Counter Intelligence Corps. He joined the National Board in 1950 in San Francisco and last October was transferred to the New York Office.

Smith Heads N. Y. Rating Board

Kenneth O. Smith has been named general manager of the New York Fire Insurance Rating Organization, replacing H. Sumner Stanley who resigned to accept the post of assistant general manager of the Factory Insurance Association. Mr. Smith was formerly assistant general manager of the organization.

Obituaries

John O. Veit

John O. Veit, president of The C. G. Braxmar Company, Inc., one of the oldest manufacturers of fire department badges and emblems, died on October 5. He was 62 years of age.

Mr. Veit had been with the company for 48 years and had been its president for the last 13. He started with Braxmar in 1908 and worked his way up through all branches of the organization. He was made secretary in 1942, vice president in 1940 and advanced to president in 1943.

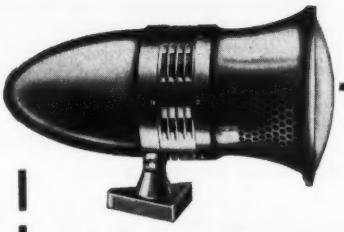
He was a familiar figure at most of the International and other fire chiefs conventions during the past 33 years.

Surviving are his widow, Anna and his son, John O., Jr., vice president and secretary-treasurer respectively, of the company; a daughter, Mrs. James F. Ross and seven grandchildren.

Chief James J. Evans of Everett, Mass.

Chief James J. Evans of the Everett, Mass., Fire Department died on October 4th in Veterans Hospital, Coral Gables, Fla., after an illness of nine months. The Chief went to Florida in January and suffered a stroke while on vacation. He was 62 years of age.

Chief Evans was appointed to the Everett Fire Department in 1920, promoted to lieutenant in 1928, to captain in 1929 and to chief in 1932. A veteran of World War I, he was a member of the



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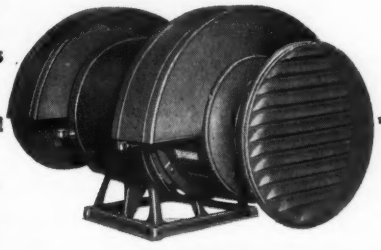

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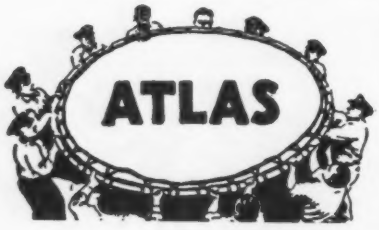

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New England Association of Fire Chiefs, the International Association of Fire Chiefs and the Massachusetts Fire Chiefs Club.

Former Chief Michael H. Stapleton

Michael H. Stapleton, 73, retired chief of the Oneonta, N. Y. Fire Department died October 11, 1956. Chief Stapleton joined the department in 1900 as a volunteer and became one of the original paid men in 1909. He was appointed assistant chief in 1918, chief in 1930, and held that post until he retired in 1953.

Chief James Waldmeier

Fire Chief James Waldmeier collapsed and died from a heart attack while directing the extinguishing of a garage fire in San Luis Obispo, Calif.

Chief Waldmeier, 47, joined the Southern California coastal city's fire department in 1942 and was named chief in 1945. —*Cliff Dektar*

F. W. Hunter, Fire Commissioner, Milford, Conn.

Frank W. Hunter, a member of the Board of Fire Commissioners at Milford, Conn., died in his home in that city on October 3. Mr. Hunter served as a fire commissioner from 1919 to 1948, and was reappointed in 1951. He was secretary of the board in 1921 and president in 1940.

A native of Bridgeport, Mr. Hunter resided in Milford for 40 years. He was a member of the Connecticut Fire Chiefs Association and the New England Association of Fire Chiefs. In 1916 he was captain of Fire Company No. 3, Milford.

Tom Magner

Many Fire Forces Fight Woonsocket Mill Fire

The worst fire to strike Woonsocket, R. I., in 11 years, threatened a large built-up area Saturday, October 6, when the 74-year-old Horse Mill, more recently known as the Woonsocket Rayon Mill, was destroyed. It was anything but a fitting introduction of Fire Prevention Week for a city that has been outstanding in this promotion.

The main building of the elongated, sprawling plant, located between Clinton Street and the Blackstone River, covered about 250,000 square feet and measured 475 feet by 96 feet. It was of typical mill construction. The idle three-story structure was closed in 1949 following strikes and economic difficulties and was later sold at auction for $75,000. Demolition operations had started on the Thursday before the fire.

The first alarm was received by the Woonsocket Fire Department at 10:30 p.m. from Box 384, Worrall and Clinton Streets. It was transmitted by a passerby who saw one of the four towers of the plant ablaze.

Deputy Fire Chief Edgar Mangeon, first officer to arrive, found the south end of the big plant facing toward Main Street heavily involved and at 10:35 p.m., he shot a second alarm, followed a minute later by a third and a general alarm which called into action practically the entire Woonsocket Fire Department and set in motion the area mutual aid plan. At about 11:00 p.m., the Civil Defense Disaster signal was sounded calling out over 100 of that organization, together with other services.

The fire tore through the old mill so rapidly that fire fighters who had attempted to attack the blaze with hose lines upon their arrival were forced to retreat. "We were lucky to save our own trucks," said Chief Mangeon. As it was, several pieces of apparatus were scorched and the windshield on the chief's car was cracked.

During the first three and a half hours of the blaze, local and mutual aid forces were compelled to concentrate on protecting exposures because of the intense heat generated by the flames, reflection of which could be seen as far away as Boston and Providence. In this defensive measure, firemen were aided by a favor-

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EDWARD B. WINTERSTEEN,
Executive Manager

Sworn to and subscribed before me this 18th day of September, 1956.

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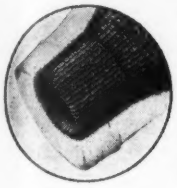

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able breeze and by volunteers, including employees of nearby establishments.

Approximately 50 families were evacuated from their homes because of the threat of involvement.

Mutual aid response

Aiding fire forces came from a wide area in northern Rhode Island and Massachusetts. They included Geneva, North Cumberland, Fruit Hill (North Providence), Cumberland Hill, Bellingham, Manville, Smithfield, North Smithfield, Glendale, Marieville, Saylesville, Pawtucket and Georgiaville. Also, Millville, Scituate, Blackstone, Lymansville, Albion, Nasonville, Harrisville, Cumberland Rescue Squad, Greenville, Johnston, Chepachet, Providence, Mendon, Franklin, Werentham, Douglas, Hopedale, Uxbridge and Milford.

Local, State and town police managed to clear the roads for the large incoming forces and to hold back the crowds of curious attracted by the glare in the sky, the blow-by-blow broadcasting of the emergency by radio stations, and the noise of responding forces.

Only a few of the incoming companies could make their way to Clinton Street, especially as the Blackstone River prevented attack from the other side of the mill. Most of the apparatus was concentrated on Social Street to protect the heavily populated area. A number of pumpers were located to take suction from the Blackstone River and these fought the fire in the rear.

Explosions spread blaze

Early in the fire a number of explosions, believed to be from chemicals which were to be used in demolition, helped spread the blaze. Hard work by firemen, however, confined the destruction to the three-story mill building. In the northerly section the one-time cotton spinning plant was saved. Also saved was the two-story office building and a two-story warehouse and the boiler building in the rear of the plant.

At the height of the fire, Chief Leo J. Roy, who assumed command, employed 23 hose streams. Deck guns and other heavy duty appliances were used but even master streams could not reach the blaze at its height. Fire fighters set up water curtains to break up the radiated heat and to prevent spread of blazing embers. Occupants of buildings in the area used garden hoses and extinguishers to help put out some 70 spot fires started by flying brands.

The fire burned out telephone poles and lines, knocking out over 2,000 phones in the city, including the Woonsocket Hospital switchboard. Utility repair crews, however, soon restored most services.

Mutual aid units responding from area Firemen's Leagues, which were assigned to cover the city during the emergency, included an engine from Pawtucket in charge of Chief Louis Monast, a ladder truck from Providence and a pumper from Milford at Station 5; at Station 2 were units of the Valley Falls Fire De-

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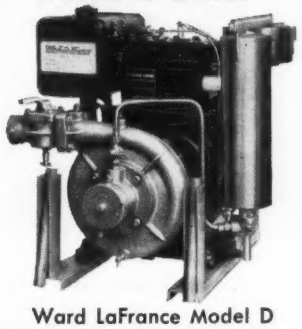

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partment and at Station 3, the Glendale pumper and rescue unit.

These and other forces responded to several alarms, received during the main blaze. On Sunday at 12:04 a.m., an alarm from Box 214 was received. This was occasioned by low pressure in the Taft-Pierce Mfg. Co. sprinkler system. At 12:28 a.m., Box 27 was received from Taft-Pierce, East School Street for the same reason. At 1:14 a.m., an alarm was received from Box 392 because of low water pressure in the sprinkler system of General Mills.

Property loss was not determined. There was no insurance on the mill. Fire, smoke and water damaged three exposures to the extent of approximately $15,000. These included Clinton Self-Service Laundry, the Amoco Service Station and Girard's Diner on Clinton Street, opposite the mill. During the flood of last year the mill and nearby area was inundated about eight feet by the overflowing Blackstone.

Notwithstanding the size of the forces involved and the severity of the fire, only a few persons were injured, none seriously.

Canadian Chiefs Urge Fire Prevention Education

In his message to the Forty-Eighth Conference of the Canadian Association of Fire Chiefs in Vancouver, B. C., September 10-13, I. A. F. C. president, Chief William Fitzgerald urged upon the 350 delegates present that basing promotions in the fire service on seniority alone is not as satisfactory as considering achievements and intelligence under a promotional examination system.

"Satisfactory performance over a number of years is no guarantee a man is suitable for a higher position," he pointed out. Chief Fitzgerald was chairman of the I. A. F. C. committee which researched firemen's compensation several years ago.

The conference, of which Chief Hugh Bird of Vancouver was host chief (and at which he was elected president of the Association) heard that Canada's fire losses are the highest, per capita in the world. The two largest causes of fire, it was disclosed, are smoking in bed and overloading of domestic electrical systems.

Continuing extensive and energetic public education, it was decided, is necessary to reduce the disastrous totals. Inspections, also, were recommended, and in this connection Vancouver's plan of having firemen perform inspection duty in each station district won endorsement of delegates. In that city, 25,000 inspections in the past two years —during which time firemen issued over 4,000 correction orders—have demonstrated the advisability of such programs.

Meetings of the Association of Canadian Fire Marshals held at the same time, heard Chief Bird and others advocate making fire prevention as much a part of every-day life as eating and sleeping.

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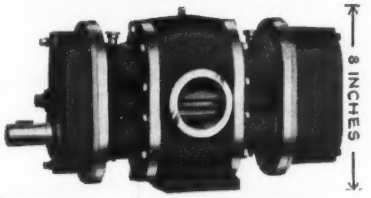

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